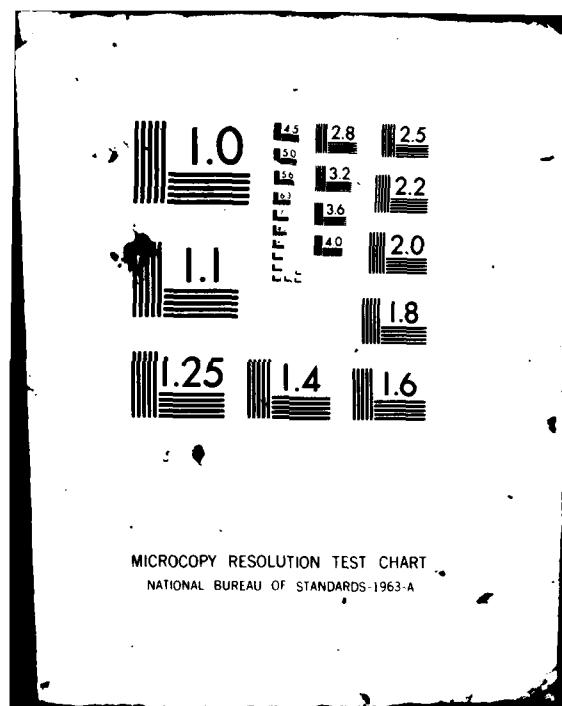


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DEPARTMENT OF THE ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1983 (U)

Submitted to Congress

FEBRUARY 1982



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RESEARCH DEVELOPMENT, TEST AND EVALUATION, ARMY

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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
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**DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
APPROPRIATION LANGUAGE**

Section 1

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, as authorized by law; ~~\$3,609,535~~ \$4,484,000, to remain available for obligation until September 30, ~~1983~~ 1984. (10 U.S.C. 2351, 4503; Department of Defense Appropriation Act, 1982; additional authorizing legislation to be proposed.)

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Research, Development, Test, and Evaluation, Army

08 FEB 82

Program and Financing (in thousands of dollars)

Identification code	21-2040-0-1-061	Budget plan (amounts for RDT&E actions programmed)			Obligations		
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
		-----	-----	-----	-----	-----	-----
Program by activities:							
Direct:							
1. Technology base	600,000	566,880	600,701	610,340	566,100	600,400	
2. Advanced technology development	160,401	210,852	314,828	147,040	216,900	306,500	
3. Strategic programs	286,632	462,108	919,001	265,763	431,300	687,100	
4. Tactical programs	1,566,770	1,872,970	1,878,969	1,637,111	1,572,700	1,878,783	
5. Intelligence and communications	42,395	47,157	73,056	39,454	47,200	69,500	
6. Defensewide mission support	577,978	729,967	798,756	681,241	694,987	784,588	
Total direct	8,124,274	3,609,538	4,484,000	3,086,888	3,531,187	4,422,849	
Reimbursable program	893,458	820,200	557,900	649,821	721,800	862,200	
10.0001	Total	8,017,732	4,229,738	5,041,900	3,738,579	4,252,987	4,885,049
Financing:							
Offsetting collections from:							
11.0001	Federal funds	-669,424	-602,468	-560,883	-643,182	-602,468	-660,583
13.0001	Trust funds	-1,141	.....	.....	-1,002	.....	.....
14.0001	Non-federal sources	-22,893	-17,732	.....	-7,317	-22,760	-17,732
17.0001	Recoveries of prior year obligations(-)	.....	.....	.....	.....	-2,987	.....
Unobligated balance available, start of year:							
21.4001	For completion of prior year budget plans	.....	.....	.....	-261,681	-318,334	-296,082
21.4002	Reprogramming from or to prior year budget plan	2,068	.....	.....	.....	.....	.....
22.4001	Unobligated balance transferred from other accounts(-)	-4,900	.....	.....	-4,900	.....	.....
24.4001	Unobligated balance available, end of year	.....	.....	.....	619,334	296,082	362,893
25.0001	Unobligated balance lapsing	6,342	.....	.....	6,342	.....	.....
40.0001	Budget authority	8,127,774	3,609,538	4,484,000	3,127,774	3,609,538	4,484,000
Relation of obligations to outlays:							
71.0001	Obligations incurred, net	.....	.....	.....	3,071,646	3,632,787	4,427,149
72.4001	Obligated balance, start of year	.....	.....	.....	1,165,992	1,291,624	1,886,311
74.4001	Obligated balance, end of year	.....	.....	.....	-1,291,624	-1,566,311	-1,846,580
77.0001	Adjustments in expired accounts	.....	.....	.....	-8,070	.....	.....
78.0001	Adjustments in unexpired accounts	-2,987
90.0001	Outlays	2,957,988	3,366,100	4,036,800

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Army

Research, Development, Test, and Evaluation, Army

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Identification code	21-2040-0-1-051	Program and Financing (in thousands of dollars)			1980 Fiscal year program		
		Budget plan (amounts for RDT&E actions programmed)			Obligations		
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
Program by activities:							
Direct:							
1. Technology base					28,364		
2. Advanced technology development					9,800		
3. Strategic programs					789		
4. Tactical programs					77,429		
5. Intelligence and communications					806		
6. Defensewide mission support					22,080		
Total direct					199,046		
Reimbursable program					101,137		
10.0001	Total				240,182		
Financing:							
Offsetting collections from:							
11.0001	Adjustment to prior year federal fund orders				26,242		
12.0001	Adjustment to prior year trust fund orders				139		
14.0001	Adjustment to non-federal sources				143		
17.0001	Recoveries of prior year obligations(-)				-2,967		
21.4001	Unobligated balance available, start of year:						
21.4001	For completion of prior year budget plans				-861,851		
21.4002	Reprogramming from or to prior year budget plan	2,050					
22.4001	Unobligated balance transferred from other accounts(-)	-4,800			-4,800		
26.0001	Unobligated balance lapsing	2,842			2,842		
40.0001	Budget authority						

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Research, Development, Test, and Evaluation, Army

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Identification code	21-2040-0-1-081	Program and Financing (in thousands of dollars)			1981 Fiscal year program		
		Budget plan (amounts for RDT&E actions programmed)			Obligations		
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.
Program by activities:							
Direct:							
1. Technology base	809,090	.....	.....	489,995	19,088	.....
2. Advanced technology development	189,401	.....	.....	137,232	22,160	.....
3. Strategic programs	260,632	.....	.....	264,575	1,657	.....
4. Tactical programs	1,866,776	.....	.....	1,409,682	109,098	.....
5. Intelligence and communications	42,386	.....	.....	38,646	3,647	.....
6. Defensewide mission support	877,976	.....	.....	659,181	16,787	.....
Total direct	3,124,274	.....	.....	2,849,913	174,360	.....
Reimbursable program	693,408	.....	.....	646,464	144,974	.....
10.0001 Total	3,817,782	.....	.....	3,496,377	319,334	.....
Financing:							
Offsetting collections from:							
11.0001 Federal funds	-669,424	.....	.....	-669,424	.....	.....
12.0001 Trust funds	-1,141	.....	.....	-1,141	.....	.....
14.0001 Non-federal sources	-82,883	.....	.....	-22,893	.....	.....
21.4001 Unobligated balance available, start of year	.....	.....	.....	.....	-319,334	.....
24.4001 Unobligated balance available, end of year	.....	.....	.....	619,334	.....	.....
25.0001 Unobligated balance lapsing	3,600	3,600	
40.0001 Budget authority	3,127,774	3,127,774	

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Army		Research, Development, Test, and Evaluation, Army				08 FEB 82		
		Program and Financing (in thousands of dollars)				1982 Fiscal year program		
Identification code	21-2040-0-1-051	Budget plan (amounts for RDT&E actions programmed)				Obligations		
		1981 actual	1982 est.	1983 est.	1981 actual	1982 est.	1983 est.	
Program by activities:								
Direct:								
1. Technology base		566,660				547,008	59,876	
2. Advanced technology development		210,652				184,731	16,921	
3. Strategic programs		462,109				429,643	52,468	
4. Tactical programs		1,572,970				1,483,608	108,366	
5. Intelligence and communications		47,157				43,853	3,504	
6. Defensewide mission support		729,867				678,190	61,777	
Total direct		3,609,536				3,066,827	262,708	
Reimbursable program						578,828	40,974	
10.0001	Total		4,229,735			3,633,655	266,682	
Financing:								
Offsetting collections from:								
11.0001	Federal funds		-602,468			-602,468		
14.0001	Non-federal sources		-17,732			-17,732		
21.4001	Unobligated balance available, start of year						-266,002	
24.4001	Unobligated balance available, end of year					266,002		
40.0001	Budget authority		3,609,535			3,609,535		

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Army	Research, Development, Test, and Evaluation, Army			08 FEB 82		
Program and Financing (in thousands of dollars)				1983 Fiscal year program		
Identification code	21-2040-0-1-061	Budget plan (amounts for RDT&E actions programmed)	Obligations	1981 actual	1982 est.	1983 est.
Program by activities:						
Direct:						
1. Technology base		699,701				650,725
2. Advanced technology development		314,520				282,579
3. Strategic programs		910,001				864,634
4. Tactical programs		1,878,969				1,883,386
5. Intelligence and communications		73,056				66,996
6. Defensewide mission support		798,768				742,818
Total direct		4,484,000				4,170,141
Reimbursable program		567,900				518,828
10.0001	Total		5,041,900			4,688,967
Financing:						
Offsetting collections from:						
11.0001	Federal funds	-580,583				-580,583
14.0001	Non-federal sources	-7,317				-7,317
24.4001	Unobligated balance available, end of year					362,833
40.0001	Budget authority		4,484,000			4,484,000

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Research, Development, Test, and Evaluation, Army

08 FEB 82

Object Classification (in thousands of dollars)

Identification code	21-2040-0-1-061	1981 actual	1982 est.	1983 est.
Direct obligations:				
Personnel compensation:				
111.101	Full-time permanent	824,064	347,889	362,260
111.301	Other than full-time permanent	16,124	16,724	16,766
111.601	Other personnel compensation	3,839	3,817	3,975
111.801	Total personnel compensation	844,027	368,000	378,000
Other services:				
112.101	Civilian personnel	33,213	34,000	35,000
121.001	Travel and transportation of persons	25,850	36,300	39,500
122.001	Transportation of things	8,914	12,700	16,500
123.201	Communications, utilities and other rent	12,238	18,700	26,200
124.001	Printing and reproduction	376	900	900
125.002	Purchases from industrial funds	836,783	291,000	345,000
125.003	Contracts	8,242,061	2,583,187	3,368,649
126.001	Supplies and materials	85,472	95,000	102,200
131.001	Equipment	98,740	107,600	112,000
141.001	Grants, subsidies, and contributions	1,284	1,200	1,300
188.001	Total direct obligations	3,088,958	3,531,187	4,422,649
Reimbursable obligations:				
Personnel compensation:				
211.101	Full-time permanent	146,281	156,800	160,200
212.101	Civilian personnel	12,983	13,300	14,000
221.001	Travel and transportation of persons	10,147	11,800	9,800
222.001	Transportation of things	977	1,300	900
223.201	Communications, utilities and other rent	8,601	10,000	8,000
224.001	Printing and reproduction	846	1,400	900
225.002	Purchases from industrial funds	16,382	23,400	20,300
225.003	Contracts	691,264	435,400	291,600
226.001	Supplies and materials	32,498	64,900	46,600
231.001	Equipment	30,372	33,200	31,800
232.001	Land and structures	286	300	300
288.001	Total reimbursable obligations	648,621	721,000	582,200
288.801	Total obligations	3,736,579	4,252,987	4,905,049

PERSONNEL SUMMARY

TOTAL NUMBER OF FULL-TIME PERMANENT POSITIONS	18,687	18,871	18,990
TOTAL COMPENSABLE WORKYEARS:			
FULL-TIME EQUIVALENT EMPLOYMENT	20,469	19,219	19,316
FULL-TIME EQUIVALENT OF OVERTIME AND HOLIDAY HOURS	540	412	404
AVERAGE ES SALARY	50,112	58,500	58,500
AVERAGE GS GRADE	9.32	9.47	9.47
AVERAGE GS SALARY	23,940	25,137	25,139
AVERAGE SALARY OF UNGRADED POSITIONS	20,162	20,358	20,093

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DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
PROGRAM ELEMENT LISTING
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Section 2 (Contd)

PROGRAM ELEMENT LISTING
INTRODUCTION AND EXPLANATION OF CONTENTS

This section has been prepared for the purpose of providing summary program element budget information concerning the US Army Research, Development, Test and Evaluation Program. The listing is preceded by three summaries: the first by Research Categories (Program), the second by Budget Activities, and the third by FYDP Programs.

A separate document, Descriptive Summaries, furnishes detail by project. In addition, it furnishes narrative information on all Research, Development, Test and Evaluation (RDTE) program elements and projects of \$5.0 million or more. The index number in the right-hand column of this Program Element Listing refers to the appropriate page in the Descriptive Summaries. The funding information reflected in these volumes corresponds to that contained in the President's Budget except for FY 1981 and FY 1982. FY 1981 and FY 1982 in the Descriptive Summaries are restructured for comparability with the FY 1983 budget request.

A direct comparison of FY 1981, FY 1982, and FY 1983 data in this Program Element Listing with data submitted in the Program Element Listing dated January 1981 will reveal significant differences. Narrative explanation of these changes is included in the appropriate individual Program Element Descriptive Summary.

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DEPARTMENT OF THE ARMY
FY 1983 R D T & E PROGRAM

EXHIBIT R-1

	SUMMARY		DATE: 08 FEB 1982	
			THOUSANDS OF DOLLARS	
	FY 1981	FY 1982	FY 1983	FY 1984
SUMMARY RECAP OF RESEARCH CATEGORIES				
RESEARCH	144,372	178,116	221,823	242,709
EXPLORATORY DEVELOPMENT	364,718	408,564	477,878	576,202
ADVANCED DEVELOPMENT	674,278	940,658	1,667,165	2,137,403
ENGINEERING DEVELOPMENT	1,230,593	1,160,016	1,039,866	1,120,078
MANAGEMENT AND SUPPORT	635,631	682,813	789,389	869,511
RESEARCH AND DEV-LOPMENT (FYDP PROGRAM 6)	2,949,792	3,370,167	4,196,121	4,945,903
OPERATIONAL SYSTEMS DEVELOPMENT	174,482	239,368	287,879	338,631
TOTAL RESEARCH DEVELOPMENT TEST + EVAL. ARMY	3,124,274	3,609,535	4,484,000	5,284,734
SUMMARY RECAP OF BUDGET ACTIVITIES				
TECHNOLOGY BASE	509,090	586,680	699,701	818,911
ADVANCED TECHNOLOGY DEVELOPMENT	189,401	210,652	314,528	486,841
STRATEGIC PROGRAMS	266,632	462,109	919,001	869,305
TACTICAL PROGRAMS	1,566,778	1,572,970	1,678,859	2,108,900
INTELLIGENCE AND COMMUNICATIONS	42,395	47,157	73,056	109,311
DEFENSEWIDE MISSION SUPPORT	577,978	729,967	798,755	891,468
TOTAL RESEARCH DEVELOPMENT TEST + EVAL. ARMY	3,124,274	3,609,535	4,484,000	5,284,734
SUMMARY RECAP OF FYDP PROGRAMS				
STRATEGIC FORCES	3,200	19,252	48,447	58,376
GENERAL PURPOSE FORCES	132,060	169,316	184,983	195,935
INTELLIGENCE AND COMMUNICATIONS	39,222	60,800	54,449	64,520
RESEARCH AND DEVELOPMENT (FYDP PROGRAM 6)	2,949,792	3,370,167	4,196,121	4,945,903
TOTAL RESEARCH DEVELOPMENT TEST + EVAL. ARMY	3,124,274	3,609,535	4,484,000	5,284,734

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FY 1983 R & D T & E PROGRAM

EXHIBIT R-1

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

DATE: 06 FEB 1982

PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS				DESCRIPTIVE E SUMMARY PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984	
1 61101A	IN-HOUSE LAB INDEPENDENT RESEARCH	1	19,476	21,806	21,902	24,611 U	1-1
2 61102A	DEFENSE RESEARCH SCIENCES	1	124,886	166,610	166,921	216,098 U	1-8
3 62108A	MATERIALS	1	11,719	10,450	9,616	11,651 U	1-92
4 62111A	ATMOSPHERIC INVESTIGATIONS	1	6,208	6,034	6,046	6,895 U	1-98
5 62120A	FUZE/NUCLEAR WPNS EFFECTS/FLUIDICS	1	6,783	6,225	6,532	11,381 U	1-105
6 62201A	AIRCRAFT WEAPONS TECHNOLOGY	1	1,666	2,094	2,492	3,303 U	1-110
7 62202A	AIRCRAFT AVIONICS TECHNOLOGY	1	6,475	6,967	6,369	9,404 U	1-115
8 62209A	AERONAUTICAL TECHNOLOGY	1	16,208	16,044	24,349	27,642 U	1-123
9 62210A	AIRDROP TECHNOLOGY	1	1,188	1,040	1,688	2,144 U	1-130
10 62303A	MISSILE TECHNOLOGY	1	25,922	30,041	37,601	37,975 U	1-135
11 62307A	HIGH ENERGY LASER TECHNOLOGY	1	18,799	22,926	31,327	34,096 U	1-146
12 62601A	TANK AND AUTOMOTIVE TECHNOLOGY	1	11,441	14,648	19,926	26,600 U	1-151
13 62603A	LARGE CAL AND NUCLEAR TECHNOLOGY	1	26,621	19,750			1-158
14 62617A	SMALL CAL AND FIRE CNTRL TECHNOLOGY	1	12,117	11,470	8,902	12,216 U	1-163
15 62618A	BALLISTICS TECHNOLOGY	1	19,606	21,841	21,637	28,234 U	1-168
16 62622A	CHEMICAL MUNITIONS/CHEMICAL CHBT SPT	1	7,279	16,468	14,829	16,810 U	1-173
17 62623A	JOINT SERVICE SMALL ARMS PROGRAM (JSSAP)	1			3,706	2,113 U	1-187
18 62701A	COMMUNICATIONS TECH	1	8,067	7,545	9,719	8,931 U	1-191
19 62703A	CMB1 SURV TARGET ACQ/ID	1	5,087	2,214	2,916	4,883 U	1-197
20 62704A	MIL ENVIRONMENTAL CRITERIA DEV	1	2,319	2,755	2,864	3,378 U	1-201
21 62708A	ELECTRICAL AND ELECTRONIC DEVICES	1	10,135	15,275	17,720	18,613 U	1-207

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APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

DATE: 08 FEB 1982

PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS				S DESCRIPTIVE E SUMMARY C PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984	
22 62706A	CHEM/BIOLOGICAL DEF/GEN INVEST	1	13,169	22,899	29,569	40,316 U	1-213
23 62707A	MAPPING - GEODESY	1	5,020	5,750	6,830	8,962 U	1-218
24 62708A	NIGHT VISION INVESTIGATIONS	1	12,673	13,184	14,101	13,934 U	1-222
25 62715A	TACTICAL ELECTRONIC WARFARE TECHNOLOGY	1	8,654	9,707			1-226
26 62716A	HUMAN FACTORS ENGR IN SYS DEV	1	7,005	8,547	9,173	11,409 U	1-236
27 62717A	HUMAN PERFORMANCE EFFECT/SIMULATION	1	3,196	3,373	3,581	4,369 U	1-241
28 62719A	MOBILITY AND WEAPONS EFFECTS TECH	1	5,291	6,268	6,410	9,402 U	1-245
29 62720A	ENVIRONMENTAL QUALITY TECH	1	6,437	7,463	6,706	9,527 U	1-251
30 62722A	MANPOWER/PERSONNEL/TRAINING	1	6,203	6,922	7,370	8,810 U	1-257
31 62723A	CLOTHING EQUIP AND SHELTER TECH	1	5,371	6,574	6,970	7,261 U	1-262
32 62724A	JT SVC FOOD SYS TECH	1	6,852	6,586	5,595	7,012 U	1-274
33 62725A	COMPUTER AND INFORMATION SCIENCE	1	2,058	1,794	1,966	2,181 U	1-279
34 62727A	NON-SYSTEM TRAINING DEVICES	1	2,691	2,667	2,900	4,709 U	1-285
35 62730A	COLD REGIONS ENGINEERING TECHNOLOGY	1	4,262	6,443	6,660	8,986 U	1-290
36 62731A	MILITARY FACILITIES ENGINEERING TECHNOLOGY	1	3,735	3,397	4,250	4,422 U	1-295
37 62732A	RPV SUPPORTING TECHNOLOGY	1	1,456		1,688	3,447 U	1-300
38 62733A	MOBILITY EQUIPMENT TECHNOLOGY	1	10,007	10,164	11,278	12,717 U	1-305
39 62734A	MED DEFENSE AGAINST CHEM AGENTS	1	5,280	26,785	26,865	37,123 U	1-312
40 62746A	TACTICAL ADP TECH	1	7,024	8,029	7,078	6,003 U	1-317
41 62770A	MILITARY DISEASE HAZARDS TECH	1	16,194	17,115	24,979	29,805 U	1-325
42 62772A	COMBAT CASUALTY CARE TECH	1	15,495	6,749	6,682	8,486 U	1-337

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APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

DATE: 08 FEB 1982

PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS				DESCRIPTIVE SUMMARY PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984	
43 62775A	COMBAT MAXILOFACIAL INJURY	1	610	1,473	2,619	3,044	U 1-341
44 62777A	SYSTEMS HEALTH HAZARD PREVENT TECH	1	12,646	13,963	16,066	21,368	U 1-345
45 62781A	ENERGY TECH APPL FOR MILITARY FACIL	1	1,436	1,977	1,891	2,102	U 1-359
	TECHNOLOGY BASE		609,090	686,680	699,701	816,911	
46 63102A	MATERIALS SCALE-UP	2	4,056	3,988	7,476	16,061	U 1-363
47 63104A	FUELS AND LUBRICANTS	2	695	1,304	1,871	3,878	U 1-368
48 63201A	AIRCRAFT POWER PLANTS AND PROPULSION	2	3,668	2,963	6,660	33,504	U 1-372
49 63206A	AIRCRAFT WEAPONS	2	1,941	497	6,081	16,263	U 1-381
50 63207A	AIRCRAFT AVIONICS EQUIPMENT	2	3,690	2,912	4,494	6,800	U 1-390
51 63209A	AIR MOBILITY SUPPORT	2	247	1,809	3,784	7,464	U 1-394
52 63211A	ROTARY WING CONTROLS/ROTOR/STRUCTURES	2	12,306	28,438	33,809	46,458	U 1-401
53 63216A	SYNTHETIC FLIGHT SIMULATORS DEVELOPMENT	2	3,926	5,960	3,522	8,270	U 1-416
54 63218A	AIRDROP EQUIP AND TECHNIQUES	2	1,775	2,695	1,688	2,084	U 1-421
55 63220A	LIGHT HELIC ADVAN TECH DEMONSTRATION	2			944	14,060	U 1-425
56 63221A	NOE AVIATION AND NAVIGATION EQUIPMENT	2		2,338	1,899	8,832	U 1-429
57 63306A	TERMINALLY GUIDED PROJECTILES	2	10,774	1,897	6,014	23,610	U 1-434
58 63313A	MSL/ROCKET COMPONENTS	2	4,228	311	9,181	14,024	U 1-439
59 63314A	HI-ENERGY LASER COMPONENTS	2			33,116	42,981	U 1-446
60 63324A	HIGH TECHNOLOGY TEST BED	2			10,711	8,261	U 1-457
61 63602A	ADVANCED LAND MOB SYSTEMS CONCEPTS	2	34,008	8,217	7,787	30,868	U 1-465
62 63606A	LANDMINE WARFARE/BARRIER DEV	2	4,346	10,768	9,924	11,336	U 1-469

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			FY 1981	FY 1982	FY 1983	FY 1984	
63 63607A	JOINT SERVICE SMALL ARMS PROGRAM (JSSAP)	2	1,899	5,467	3,466	3,934 U	1-476
64 63621A	COMBAT VEHICLE PROPULSION SYS	2	4,476	12,897	12,810	17,622 U	1-480
65 63631A	CMBT VEH TURRET AND CHASSIS SUBSYS	2	3,226	7,654	11,146	12,936 U	1-488
66 63636A	COMBAT VEHICLE ARMOR/ANTI-ARMOR	2			10,888	11,233 U	1-496
67 63702A	ELECTRIC POWER SOURCES	2	3,082	5,072		U	---
68 63710A	NIGHT VISION ADVANCED DEVELOPMENT	2	17,896	36,817	30,224	34,818 U	1-504
69 63725A	REMOTELY PILOTED VEHICLES/DRONES	2	5,126	4,608	4,186	8,800 U	1-515
70 63731A	MANPOWER AND PERSONNEL	2	3,369	4,103	8,747	12,077 U	1-520
71 63732A	COMBAT MEDICAL MATERIAL	2	192	190		U	---
72 63734A	COMBAT ENGINEERING SYSTEMS	2		269	2,730	2,127 U	1-526
73 63737A	ANTI-RADIATION MSL COUNTER MEASURES	2					1-531
74 63739A	HUMAN FACTORS IN TNG/OPER EFFECT	2	1,948	3,111	3,768	8,490 U	1-536
75 63742A	ADV ELECTRONIC DEVICES DEV	2		2,233	4,006	4,902 U	1-541
76 63743A	EDUCATION AND TRAINING	2	7,807	8,381	9,784	9,820 U	1-545
77 63744A	TRAINING SIMULATION	2	1,630	2,212	2,790	3,152 U	1-549
78 63747A	SOLDIER SUPPORT/SURVIVABILITY	2	3,842	3,134		U	---
79 63748A	ADV DEV OF AUTOMATIC TEST EQ/SYS	2	6,392	6,619	11,336	11,610 U	1-553
80 63749A	TECHNICAL VULNERABILITY REDUCTION	2	5,866	12,899	10,198	10,234 U	1-561
81 63750A	DRUG AND VACCINE DEVELOPMENT	2	4,766	6,073		U	---
82 63751A	MEDICAL DEFENSE AGAINST CHEM WARFARE	2		2,933		U	---
83 63752A	DEMILITARIZATION CONCEPTS	2		9,467	12,768	13,760 U	1-565

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DATE: 06 FEB 1982

PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS				DESCRIPTIVE E SUMMARY PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984 C	
84 63761A	ELEC WRFR VULN/SUSCEP TECH SUPPORT	2					1-569
85 63762A	ELECTRONIC WARFARE FEASIBILITY DEVELOPMENT	2			4,996	8,138 U	1-574
86 63763A	INDUSTRIAL BASE BIO WRFR VACCINES/DRUGS	2			4,851	5,354 U	1-578
87 63765A	NONTACTICAL ADP TECHNOLOGY	2			495	492 U	1-581
	ADVANCED TECHNOLOGY DEVELOPMENT		159,401	210,602	314,526	486,041	
88 63304A	BMD ADVANCED TECHNOLOGY	3	123,222	126,494	143,243	161,464 U	II-12
89 63308A	BALLISTIC MSL DEF SYS TECH	3	143,410	335,616	727,311	659,465 U	II-17
90 12814A	SPECIAL PROGRAM	3					II-1
91 12817A	MOBILE COMMAND CENTERS	3			4,961	49,248 U	II-4
92 12821A	CLASSIFIED PROGRAM	3					II-9
	STRATEGIC PROGRAMS		266,632	462,108	919,001	869,305	
93 63210A	JOINT SURVIVABILITY INVESTIGATIONS	4	846	930	1,103	1,117 U	II-125
94 63222A	SPECIAL ELECTRONIC MISSION AIRCRAFT-X	4			498	14,259 U	II-130
95 63302A	HIGH-TO-MEDIUM AIR DEFENSE DEV	4			27,172	34,946 U	II-134
96 63303A	SURF-TO-SURF MSL HOCKET SYS	4	281	2,989	16,407	31,224 U	II-138
97 63307A	SHORT RANGE AIR DEF SELF PROT WPNS	4	1			U	---
98 63316A	ADVANCED ROCKET CONTROL SYSTEM	4	21,170		27,869	53,992 U	II-145
99 63320A	CORPS SUPPORT WEAPON SYSTEM	4	14,294	10,727	6,103	22,465 U	II-148
100 63323A	LIGHT WEIGHT AIR DEFENSE SYSTEM	4			3,466	14,751 U	II-153
101 63604A	NUCLEAR MUNITIONS AND RADIAKS	4	1,691	3,568			II-158

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PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS				DESCRIPTIVE E SUMMARY C PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984	
102 63606A	WEAPONS AND AMMUNITION (H)	4	1,099				U ---
103 63612A	RATTLER	4	16,006		17,900	31,269 U	11-164
104 63615A	LETHAL CHEMICAL MUNITIONS CONCEPTS	4	870	8,157	13,733	20,377 U	11-168
105 63619A	LANDMINE/BARRIER SYS	4	2,630	6,050	4,595	19,932 U	11-173
106 63627A	COMBAT SUPPORT MUNITIONS	4	3,364	3,149	2,700	13,700 U	11-177
107 63628A	FIELD ARTILLERY AMMO DEV	4	11,905	24,647	23,951	32,623 U	11-181
108 63629A	DIVISION SUPPORT WEAPONS SYSTEM	4	5,096	2,032	6,941	70,127 U	11-192
109 63632A	ARMORED CMBT LOG SPT VEHICLE FAMILY	4	4,188	101		6,350 U	11-198
110 63633A	TANK AND MORTAR AMMUNITION DEVELOPMENT	4			9,050	12,680 U	11-200
111 63635A	MOBILE PROTECTED GUN	4		7,955	37,354	48,156 U	11-207
112 63702A	ELECTRIC POWER SOURCES	4			2,996	6,197 U	11-221
113 63705A	PHYSICAL SECURITY	4	2,269	3,813	5,452	6,897 U	11-226
114 63706A	IDENTIFICATION-FRIEND OR FOE DEV	4	2,902	9,169	6,146	11,020 U	11-234
115 63707A	COMMUNICATIONS DEVELOPMENT	4	21,668	6,316			11-241
116 63711A	AIRCRAFT SURVIVABILITY EQUIPMENT	4	3,682	12,162	3,563	20,616 U	11-248
117 63713A	ADDS-ARMY DATA DISTRIBUTION SYSTEM	4		10,664	32,886	19,657 U	11-254
118 63716A	EW VULN/SUSC	4			26,164	32,199 U	11-259
119 63719A	SPECIAL PURPOSE DETECTORS	4				6,565 U	---
120 63721A	CHEMICAL DEFENSE MATERIEL CONCEPTS	4	17,383	20,026	26,542	26,799 U	11-278
121 63723A	COMMAND AND CONTROL	4	13,660	20,939	22,133	41,232 U	11-290
122 63726A	COMBAT SUPPORT EQUIPMENT	4	6,736	6,707	6,113	13,761 U	11-300

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PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS			DESCRIPTIVE SUMMARY PAGE NUMBER
			FY 1981	FY 1982	FY 1983		FY 1984
123 63730A	TACTICAL SURVEILLANCE SYSTEM	4	10,282	14,984		11-309
124 63732A	COMBAT MEDICAL MATERIAL	4			224	260 U 11-313
125 63737A	ANTI-RADIATION MSL COUNTER MEASURES	4	4,343	6,305		U ---
126 63740A	DIV AIR DEFENSE COMD/CNTRL	4	12,029	9,171	4,398	8,344 U 11-317
127 63741A	METEOROLOGIC EQUIPMENT DEVELOPMENT	4				2,821 U ---
128 63745A	TAC ELECTRONIC SPT MEASURE SYS	4	14,878	13,911		11-324
129 63746A	SINGLE CHANNEL GRD/ABN RADIO SUB-SYS	4	26,000	13,682	17,862	U 11-328
130 63747A	SOLDIER SUPPORT/SURVIVABILITY	4			2,281	8,888 U 11-339
131 63750A	DRUG A'D VACCINE DEVELOPMENT	4			8,796	12,887 U 11-344
132 63751A	MEDICAL DEFENSE AGAINST CHEM WARFARE	4			2,924	38,632 U 11-349
133 63753A	BATTLEFIELD DATA SYSTEMS	4			1,891	8,428 U 11-353
134 63765A	TAC ELEC C/M SYS	4	8,901	17,783		11-357
135 63764A	MEDICAL CHEM DEFENSE LIFE SUPPORT MAT	4			38,188	30,430 U 11-374
136 63766A	TACTICAL ELECTRONIC SURVEILLANCE SYS	4				11-378
137 64202A	AIRCRAFT WEAPONS	4	8,571	3,496	686	676 U 11-382
138 64204A	AIR MOBILITY SUPPORT EQUIPMENT	4	608	2,308	2,246	6,387 U 11-386
139 64206A	UH-60A BLACKHAWK	4		8,140	8,708	19,480 U 11-392
140 64207A	ADVANCED ATTACK HELICOPTER	4	172,841	91,874	33,726	38,448 U 11-401
141 64212A	COBRA TOW	4	2,487	10,616	12,246	4,418 U 11-419
142 64213A	CH-47 MODERNIZATION	4	670			U ---
143 64216A	AIRCRAFT PROPULSION SYSTEMS	4			1,007	4,317 U 11-425

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			FY 1981	FY 1982	FY 1983	FY 1984 C	
144	64217A SYNTHETIC FLIGHT TRAINING SYSTEMS	4	500	3,063	30,961	21,063 U	11-429
145	64218A AIRDROP EQUIP DEVELOPMENT	4	1,000	2,918	3,136	4,144 U	11-414
146	64220A ARMY HELICOPTER IMPROVEMENT PROG	4	20,667	38,497	70,811	55,686 U	11-419
147	64221A SURVEILLANCE SYSTEM	4		3,910	12,668	11,241 U	11-451
148	64222A JOINT SERVICE ROTARY WING AIRCRAFT DEVEL	4			49,765	77,280 U	11-459
149	64268A AIRCRAFT COMPONENT IMPROVEMENT PROGRAM	4			10,998	17,635 U	11-463
150	64306A STINGER	4	5,667	16,121		U	11-408
151	64307A PATRIOT (SAM-D)	4	75,362	57,612	47,076	66,076 U	11-469
152	64308A ROLAND	4	12,613			U	11-495
153	64310A HELIBORNE MISSILE-HELLFIRE	4	51,516	24,226	10,327	286 U	11-496
154	64311A PERSHING II	4	140,077	150,580	111,301	23,598 U	11-515
155	64313A GRASS BLADE	4	43,713	20,626	17,117	9,546 U	11-510
156	64314A MULTIPLE LAUNCH ROCKET SYS	4	60,925	38,172	20,215	U	11-513
157	64316A FIRE AND FORGET HELLFIRE	4	4,786			U	---
158	64318A DIVISION AIR DEFENSE GUN	4	85,203	20,940	10,918	U	11-552
159	64321A JOINT TACTICAL FUSION PROGRAM	4		30,417			11-568
160	64601A INFANTRY SUPPORT WEAPONS	4	4,983	11,707	5,601	4,870 U	111-1
161	64603A NUCLEAR MUNITIONS	4	13,163	53,920			111-10
162	64608A ARMY SMALL ARMS PROGRAM	4	748	393		U	---
163	64809A COMBAT SUPPORT SYSTEMS	4	707	3,037	2,640	4,431 U	111-24
164	64810A LETHAL CHEMICAL MUNITIONS	4	76	2,169		3,616 U	111-28

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			FY 1981	FY 1982		
165	64612A COUNTERMINE AND BARRIERS	4	1,999	2,974	6,192	7,677 U 111-29
166	64614A FLD ARTY WPNS/AMMO (155MM) (H)	4	341			U ---
167	64616A FIGHTING VEHICLE SYS	4	41,661	103,393	50,488	33,612 U 111-39
168	64619A LANDMINE WARFARE	4	11,133	4,843	9,701	7,459 U 111-55
169	64620A TANK SYSTEMS	4	51,640	28,407	11,961	U 111-62
170	64621A COPPERHEAD	4	6,026	3,294	2,076	U 111-76
171	64623A VIPER (H)	4	7,774			U ---
172	64624A HIGH MOBILITY MULTI-PURPOSE VEHICLE	4	4,670	3,013	2,743	U 111-85
173	64626A FIRE INTEGRATION SPT TEAM VEH	4	8,432	8,600	6,926	U 111-90
174	64628A INDIRECT FIRE TRAINING MUNITIONS	4		1,337		1,443 U 111-96
176	64630A TANK GUN COOPERATIVE DEVELOPMENT	4	61,473	82,724	54,342	61,252 U 111-97
178	64631A FLD ARTY AMMUNITION	4	2,243	1,460	2,573	15,824 U 111-114
177	64632A 105MM TANK AMMUNITION	4	6,005	8,193	1,059	7,938 U 111-119
178	64701A COMM ENGINEERING DEV	4	5,809	8,865	11,705	14,004 U 111-124
179	64702A JOINT TACTICAL INFO DISTRIBUTION SYSTEMS	4		15,854	14,556	12,472 U 111-132
180	64704A UNATTENDED GROUND SENSORS	4	3,965	6,927	4,105	U 111-139
181	64705A MOBILE INTEGRATED COMM AND NAVIGATION SYS	4		17,889	14,754	7,837 U 111-143
182	64706A RADIOLOGICAL DEFENSE EQUIPMENT	4	318	308	838	960 U 111-147
183	64709A IDENTIFICATION-FRIEND OR FOE EQ	4	1,410	2,418	2,660	4,793 U 111-152
184	64710A NIGHT VISION DEVICES	4	4,369	8,328	4,931	8,777 U 111-157
185	64711A AIRCRAFT SURVIVABILITY EQUIPMENT	4	12,942	14,408	20,336	17,018 U 111-161

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DEPARTMENT OF THE ARMY
FY 1983 R D T & E PROGRAM

EXHIBIT R-1

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

DATE: 08 FEB 1982

PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS					5 E C PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984		
186 64712A	TACTICAL C3 SYSTEMS ENGINEERING	4	9,570	8,110	14,900	23,021	U	111-168
187 64713A	COMBAT FEEDING, CLOTHING AND EQUIPMENT	4	1,951	2,531	2,574	5,276	U	111-181
188 64714A	TACTICAL ELECTRICAL POWER SOURCES	4	3,061	1,533	1,805	5,962	U	111-186
189 64717A	GENERAL COMBAT SUPPORT	4	6,748	8,001	5,967	11,600	U	111-190
190 64718A	PHYSICAL SECURITY	4	6,147	6,761	6,099	6,157	U	111-197
191 64722A	EDUCATION AND TRAINING	4			995	4,723	U	111-203
192 64723A	SPECIAL PURPOSE DETECTORS	4	746			U		---
193 64724A	BIOLOGICAL DEFENSE MATERIEL	4	2,047	1,034	391	U		111-207
194 64725A	CHEMICAL DEFENSE MATERIEL	4	17,423	37,898	26,017	46,288	U	111-212
195 64727A	COMMAND AND CONTROL	4	19,864	14,965	13,650	26,486	U	111-230
196 64730A	REMOTELY PILOTED VEHICLES	4	56,689	73,094	77,949	110,138	U	111-243
197 64740A	TACTICAL SURVEILLANCE SYSTEM	4	2,466	4,696				111-262
198 64745A	TAC ELECTRONIC SPT MEASURE SYS	4	29,007	7,780		U		---
199 64746A	AUTOMATIC TEST SUPPORT SYSTEMS	4			4,963	2,940	6,012	U
200 64748A	STANDOFF TARGET ACQUISITION SYSTEM	4	57,486				U	---
201 64750A	TAC ELEC C/M SYS	4	5,250	5,821				111-270
202 64751A	SINGLE CHANNEL ORD/ABN RADIO SUB ENG	4				16,672	U	---
203 64753A	BATTLEFIELD DATA SYSTEMS	4			27,666	43,339	U	111-276
204 64757A	MEDICAL CHEMICAL DEFENSE LIFE SPT MAT	4				4,936	U	---
205 64758A	DRUG AND VACCINE DEVELOPMENT	4				4,936	U	---
206 64766A	TACTICAL ELECTRONIC SURVEILLANCE SYS	4						111-281

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FY 1983 R D T & E PROGRAM

EXHIBIT B-1

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL. ARMY

DATE: 08 FEB 1982

PROGRAM LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS				DESCRIPTIVE E SUMMARY PAGE NUMBER
			FY 1981	FY 1982	FY 1983	FY 1984	
207	64779A JT INTEROPERABILITY TAC COMD/CNTRL	4	23,176	29,466	30,066	46,036 U	III-286
208	65710A JOINT CB CONTACT POINT AND TEST	4	729	1,413	1,451	2,216 U	III-307
209	23724A HV ANTI-TANK ASSAULT WPN SYS (TOW)	4	22,731	6,569	1,961	1,967 U	II-23
210	23726A ADV FIELD ARTY TAC DATA SYS	4	2,129	6,266	7,224	26,446 U	II-29
211	23730A CHAPARRAL	4	22,006	19,616	26,381	24,516 U	II-36
212	23731A SAM HAWK/HAWK IMP PROG	4	9,481	39,436	37,971	87,126 U	II-46
213	23733A LANCE (NNL) WARHEAD (H)	4	707			U	---
214	23735A COMBAT VEHICLE IMPROVE PROG	4	20,322	29,396	46,786	49,637 U	II-53
215	23739A AN/TSQ-73 MODIFICATIONS	4	1,330	632	1,026	U	II-65
216	23740A MANEUVER CONTROL SYSTEM (MCS)	4	7,877	14,826	14,947	9,866 U	II-69
217	23741A PROD IMPR VULCAN AIR DEF SYS	4	9,491			U	---
218	23742A COMMUNICATIONS SYSTEM ENGINEERING PROGRAM	4			1,486	1,666 U	II-75
219	28010A JT TACTICAL COMM PROG	4	38,084	42,966	47,184	52,616 U	II-79
220	33142A SATCOM GROUND ENVIRONMENT	4	23,362	41,524		U	---
221	33145A EUCOM C3 SYSTEMS TACTICAL PROGRAMS	4	1,133 1,568,776	4,016 1,672,970	827 1,678,959	4,946 U 2,106,900	II-121
222	63712A MAPPING AND GEODESY	0	1,099	1,042	3,424	1,065 U	III-346
223	64201A AIRCRAFT AVIONICS	0	4,611	11,803	3,789	20,302 U	III-352
224	64716A MAPPING AND GEODESY	0	309	100		3,899 U	III-358

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DEPARTMENT OF THE ARMY
FY 1983 R D T & E PROGRAM

EXHIBIT R-1

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL, ARMY

DATE: 06 FEB 1982

LINE ELEMENT NO. NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS			DESCRIPTIVE E SUMMARY	PAGE NUMBER
			FY 1981	FY 1982	FY 1983			FY 1984 C
225 64778A	NAVSTAR GLOBAL POS SYS (USER EQ)	0	17,849		11,911	4,773 U	III-166
226 12814A	SPECIAL PROGRAM	5					---
227 31022A	SCIENTIFIC AND TECH INTELLIGENCE (H)	0					---
228 31307A	FOREIGN SCIENCE AND TECHNOLOGY CENTER	0					III-311
229 31327A	TECHNICAL RECONN AND SURVEILLANCE	0					III-315
230 33111A	STRATEGIC ARMY COMMUNICATIONS	0	684	788	812	954 U	III-319
231 33126A	LONG-HAUL COMMUNICATIONS (DCS)	0	7,267	7,460	7,578	7,492 U	III-123
232 33142A	SATCOM GROUND ENVIRONMENT	0			35,545	67,043 U	III-327
233 33401A	COMMUNICATIONS SECURITY	0	6,118	6,948			III-341
	INTELLIGENCE AND COMMUNICATIONS		42,395	47,167	79,056	109,511	
234 63718A	EW VULNERABILITY/SUSCEPTIBILITY	0	17,429	22,226		U	---
235 63738A	NON-SYSTEM TRAINING DEVICES	0	1	1,360		6,343 U	III-377
236 64268A	ACFT ENGINE COMPONENT IMPROVE PROG	0	8,579	11,609		U	---
237 64715A	NON-SYSTEM TNG DEVICES ENOR	0	12,211	11,253	8,645	19,064 U	III-379
238 64728A	METEOROLOGICAL EQUIPMENT SYSTEMS	0	4,886	2,098	2,172	1,776 U	III-388
239 65102A	TRADOC STUDIES AND ANALYSES	0	1,400	1,843	3,287	6,429 U	III-394
240 65201A	AVIATION ENGINEERING FLIGHT ACTIVITY	0	4,365	6,432	6,781	6,714 U	III-400
241 65301A	KHAJALEIN MISSILE RANGE	0	125,475	139,351	152,140	151,601 U	III-404
242 65702A	SUPPORT OF DEVELOPMENT TESTING	0	22,604	38,105	43,160	58,977 U	III-409
243 65706A	MATERIEL SYSTEMS ANALYSIS	0	9,874	12,435	13,186	14,218 U	III-422
244 65709A	EXPLOITATION OF FOREIGN ITEMS	0	1,480	1,953	2,021	2,737 U	III-427

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DEPARTMENT OF THE ARMY
FY 1983 R D T & E PROGRAM

EXHIBIT R-1

APPROPRIATION: 2040 A RESEARCH DEVELOPMENT TEST + EVAL. ARMY

DATE: 06 FEB 1982

PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACI	THOUSANDS OF DOLLARS			DESCRIPTIVE E SUMMARY PAGE NUMBER
			FY 1981	FY 1982	FY 1983		FY 1984 C
245	65/12A SUPPORT OF OPERATIONAL TESTING	6	36,119	42,584	50,106	60,283 U III-432
246	65/16A DEFENSE SYSTEMS MANAGEMENT COLLEGE	6	1,144	203	202	201 U III-451
247	65801A PROGRAM-WIDE ACTIVITIES	6	51,693	63,591	70,101	72,037 U III-454
248	65802A INT'L COOPERATIVE RESEARCH AND DEV	6	645	980	1,041	1,083 U III-463
249	65803A TECHNICAL INFO ACTIVITIES	6	3,088	4,628	6,248	6,179 U III-468
250	65804A DARCOM MAJOR RANGE/TEST FACIL	6	230,981	278,874	300,671	337,847 U III-474
251	65805A MUNITIONS STANDARDIZATION EFFECT AND SAFETY	6	5,776	7,083	8,047	10,734 U III-497
252	65806A DOD HIGH ENERGY LASER SYSTEMS TEST FAC	6		40,224	34,030	32,177 U III-507
253	65807A MAINSITE	6			17,118	36,585 U III-513
254	65812A PRODUCTIVITY INVESTMENT FUNDING	6		3,889	34,139	21,668 U III-517
255	65890A INSTL. AUDIOVISUAL SPT (R/D)	6		2,276	2,344	2,408 U III-526
256	65898A MOT HQ (RESEARCH/DEVELOPMENT)	6	30,788	39,717	45,304	49,007 U III-529
	DEFENSEWIDE MISSION SUPPORT		677,978	729,987	798,755	891,466
TOTAL	RESEARCH DEVELOPMENT TEST + EVAL. ARMY		3,124,274	3,609,635	4,484,000	5,284,734

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DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
PERFORMER DISTRIBUTION
(\$ in Thousands)

Section 3

Appropriation: Research, Development, Test and Evaluation, Army

		FY 1981	FY 1982	Total Obligational Authority	FY 1983	FY 1984
1.	For operation of installations of the reporting DOD Component <u>Government operated</u>	1,254,572	1,434,791	1,656,285	1,955,118	
2.	For operation of installations of the reporting DOD Component <u>Contractor operated</u>	67,905	77,694	94,574	111,503	
3.	For contracts directly in support of work actually performed at installations of the reporting DOD Component	251,827	265,238	282,148	332,652	
4.	For work assigned to other Department of Defense activities	163,812	185,966	228,175	269,018	
5.	For work assigned to activities of other Government agencies	26,317	26,911	27,414	26,782	
6.	For work performed by industrial contractors ("profit" organizations)	1,248,014	1,485,304	2,046,548	2,414,762	
7.	For work performed by educational institutions					
	a. Designated Federal Contract Research Centers	16,130	18,609	20,033	21,730	
	b. Other Institutions	64,803	81,947	91,612	109,934	
8.	For work performed by other "non-profit" organizations					
	a. Designated Federal Contract Research Centers	8,852	10,851	11,427	16,020	
	b. Other Institutions	22,022	22,804	23,784	25,683	
9.	Total Research, Development, Test and Evaluation, Army Appropriation	3,124,274	3,609,515	4,484,000	5,284,734	

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**DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
INSTALLATION ANALYSIS - IN-HOUSE**

Section 4

This Installation analysis indicates the resources of dollars and manpower utilized by Army installations in the accomplishment of the in-house research, development, test and evaluation effort, including contractor operated installations, under the management control of the Army. Installations reported include both installations classified as research, development, or test installations and research, development, or test units located at multi-mission installations. Funds being reported cover both direct costs and indirect or support costs. These funds are a part of project costs shown in the budget for the various projects. The amounts reflected under the category "RDTE Funds" include funds received directly through command channels, and reimbursable RDTE effort performed for other Army activities and other Department of Defense agencies. "All Other Funds" reflect the in-house effort at multi-mission installations for other than Research, Development, Test and Evaluation, Military Construction and Military Personnel costs. Military Personnel costs reflect those military personnel assigned to RDTE activities and other military personnel located at the installation in support of non-RDTE activities at multi-mission posts.

The personnel reflected includes spaces assigned and charged directly to the RDTE appropriation as reflected in the personnel summary and spaces assigned to Army Industrial Fund installations operated with RDTE funds. Contractor personnel shown are engaged in direct support or operation of Army installations.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

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INSTALLATION ANALYSIS - IN-HOUSE

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INSTALLATION ANALYSIS - IN-HOUSE

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Section 6 (Cont'd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)										
		DOTE Funds				All Other Funds ^{1/}			Sub- Total			MIL. Pers.			Civil Paid		Service Paid		Contractor Paid		MIL. Pers.	
		Mgmt	Bureau	Army	Other	Army	Other	DOD	RDTE	Other	Total	RDTE	Other	Total	From Army	From Other	RDTE	From Other	RDTE	From Other	RDTE	From Other
Army Indus; Trial Fund Installations																						
1.																						
Aberdeen	81	53214	15758	1818	3173	71981	2232	-	74215	1623	52	8	39	-	106	-	1628					
Provng Ground, Aber- deen, Maryland	82	66912	16000	1875	1200	86007	2829	-	88816	1451	45	8	35	-	116	-	1655					
	83	67461	16500	1875	1200	87016	2868	-	89904	1451	45	8	36	-	116	-	1656					
	84	78404	16500	1875	1200	97979	2881	-	100860	1451	45	8	49	-	116	-	1669					
2.																						
Armament Research and Development Command,	81	81173	41188	10129	-	134490	2401	105	136996	3230	315	-	-	-	114	5	3664					
Dover, New Jersey	82	87297	42810	6815	-	136942	1951	122	139015	3237	315	-	-	-	80	5	3637					
	83	92412	40430	6925	-	139767	1978	124	141869	3242	310	-	-	-	80	5	3637					
	84	102544	39030	6950	-	148524	1987	149	150660	3340	315	-	-	-	80	6	3741					
3.																						
Army Material and Mechanics Research Center, Wates-	81	18800	8087	191	3540	30818	274	-	31092	473	9	111	1	-	13	-	607					
Town, Massa- chusetts	82	19689	9000	450	3680	32819	415	-	33214	473	9	124	1	-	17	-	624					
	83	24667	9500	500	3790	38457	420	-	38877	473	9	124	1	-	17	-	624					
	84	21251	9800	600	3800	37451	422	-	37871	473	9	124	1	-	17	-	624					

^{1/} Exclusive of Military Personnel and Military Construction.

^{2/} ARRADCOM AF located on the Aberdeen Installation, includes Ballistic Research Laboratory and Chemical Systems Laboratory.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)						PERSONNEL (Man-Years)						Contractor				
		RDTE Funds			All Other Funds			Mil. Pers.			Civil Service			Contractor				
		Hgmt	Bureau	Army	Other		Sub-Total	RDTE	Other	Total	From RDTE	Paid	From RDTE	Paid	From RDTE	In Work	Mil. Pers.	Total
<u>Army Industrial Fund Installations</u>																		
4.																		
Benet Weapons Laboratory, Watervliet, New York	81	10575	-	130	-	10705	21	-	10726	133	2	-	-	-	1	-	136	
	82	10975	-	140	-	11115	24	-	11139	133	2	-	-	-	1	-	136	
	83	12075	-	150	-	12225	25	-	12250	133	2	-	-	-	1	-	136	
	84	13275	-	150	-	13425	25	-	13450	133	2	-	-	-	1	-	136	
5.																		
Harry Diamond Laboratories, Adelphi, Maryland	81	10922	20271	4666	9961	49820	63	63	45946	691	121	310	-	-	1	1	11	
	82	10096	21373	6283	7989	45741	73	73	45887	710	171	258	-	-	1	1	114	
	83	17374	18931	4636	6174	47115	74	74	47263	873	120	186	-	-	1	1	115	
	84	18110	18177	5065	6701	48051	75	75	48203	826	124	189	-	-	1	1	115	
6.																		
Missile Research and Development Command, Redstone Arsenal, Alabama	81	69385	4643	2684	352	77064	2317	84	79465	1194	41	-	-	-	110	4	1351	
	82	71221	6614	2449	320	80604	2097	98	82299	1079	41	-	-	-	86	4	1210	
	83	68088	7699	2642	125	78756	2052	148	80954	1069	41	-	-	-	83	6	1202	
	84	72327	10019	4690	150	87186	2012	199	89597	999	48	-	-	-	81	8	1136	
Subtotal Army Industrial Fund	81	244069	91967	19818	15026	370880	7308	252	378460	7144	542	479	60	-	347	12	8514	
	82	266210	95797	18032	11189	393228	7389	293	400910	7083	583	390	36	-	303	12	8407	
	83	282077	93060	16728	11489	403154	7417	346	411117	7201	530	318	37	-	300	14	8400	
	84	307911	93526	19330	12051	4328.8	7602	423	440643	7222	543	321	50	-	298	17	8451	

1/ Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds			Mil. Pers.				Civil Paid		Service Paid		Contractor Paid		Mil. Pers.			
		Mgmt	Bureau	Army	Other	Sub-	Total	RDTE	Other	Total	RDTE	From Army	From Other	RDTE	From Army	From Other	RDTE	From Funds	From Work	Other	Total
Army Non-Ind																					
ustrial Fund																					
Installations																					
7.																					
Aberdeen	81	92447	19416	1658	69376	182897	8397	6009	197303	2426	-	1786	125	205	503	360	5405				
Proving	82	131889	21713	1832	75144	230578	9844	7928	248350	2593	-	1772	215	225	519	418	5742				
Ground, Aber-	83	123875	19939	3285	75236	222335	10194	8179	240708	2524	-	1726	230	225	521	418	5644				
deen, Maryland	84	159196	20239	3200	75236	257871	10243	8218	276312	2528	-	1726	230	225	521	418	5648				
8.																					
Aeromedical	81	3303	436	41	-	3780	1431	-	5211	69	-	-	-	-	-	-	77	-	146		
Research	82	4720	-	-	-	4720	1686	-	6406	63	-	-	-	-	-	-	78	-	141		
Laboratory,	83	5064	-	-	-	5064	1715	-	6779	73	-	-	-	-	-	-	78	-	151		
Ft. Rucker,	84	6222	-	-	-	6222	1723	-	7945	73	-	-	-	-	-	-	78	-	151		
Alabama																					
9.																					
Air Defense	81	2965	692	35	348	4040	2072	-	6112	85	-	-	-	-	-	-	117	-	202		
Board, Ft.	82	3101	235	-	275	3611	2310	-	5921	85	-	-	-	-	-	-	112	-	197		
Bliss, Texas	83	3083	250	-	-	3333	2354	-	5687	85	-	-	-	-	-	-	112	-	197		
	84	3172	275	40	85	3572	2365	-	5917	85	-	-	-	-	-	-	112	-	197		
10.																					
Alborne	81	1810	38	19	229	2096	1771	-	3867	40	-	-	-	-	-	-	100	-	140		
Board, Ft.	82	1496	-	-	-	1496	2062	-	3558	40	-	-	-	-	-	-	100	-	140		
Bragg, North	83	1494	-	-	-	1494	2108	-	3602	40	-	-	-	-	-	-	100	-	140		
Carolina	84	1590	-	-	-	1590	2112	-	3702	40	-	-	-	-	-	-	100	-	140		

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)									
		RDT&E Funds			All Other Funds ^{1/}			Mil. Pers.				Civil Service Paid			Contractor Paid			Mil. Pers.			
		Mgmt	Bureau	Army	Other	DOD	Sub- Total	ROTE	Other	Total	ROTE	From Army	From Other	ROTE	From Army	From Other	RDT&E Funds	Work	Other	Total	
Army Non-Industrial Fund																					
Installations																					
11.																					
Arment	81	5644	25	215	-	-	5884	250	81	6217	100	4	-	-	-	-	15	5	124		
Research and	82	6494	-	275	-	-	6769	285	171	7225	117	5	-	-	-	-	15	9	146		
Development	83	5628	-	285	-	-	5913	196	176	6285	100	5	-	-	-	-	10	9	124		
Command,	84	6169	-	150	-	-	6519	197	177	6893	106	5	-	-	-	-	10	9	13		
Dover, New Jersey																					
12.																					
Armor and Engineer	81	4880	4908	-	-	-	9788	4021	-	13809	98	-	-	-	-	-	221	-	325		
Board, Ft.	82	5726	1000	-	-	-	6726	4743	-	11469	88	-	-	-	-	-	230	-	318		
Knox, Kentucky	83	6059	500	-	-	-	6559	4721	-	11330	88	-	-	-	-	-	221	-	315		
Eustis, Virginia	84	5583	500	-	-	-	6083	4794	-	10877	88	-	-	-	-	-	221	-	315		
13.																					
Army Communic- ative Technical	81	601	-	-	-	-	601	33	-	634	12	-	-	-	-	-	2	-	14		
Office, Ft.	82	775	-	-	-	-	775	38	-	813	11	-	-	-	-	-	2	-	13		
Eustis,	83	945	-	-	-	-	945	19	-	984	11	-	-	-	-	-	2	-	13		
	84	965	-	-	-	-	945	19	-	984	11	-	-	-	-	-	2	-	13		

^{1/} Exclusive of Military Personnel and Military Construction.

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Section 4 (Cont'd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation - and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ^{1/}			MIL. Pers.				Civil Paid			Service Paid			Contractor Paid			MIL. Pers.
		Mgmt	Bureau	Army	Other	DOD	Sub- Total	RDTE	Other	Total	RDTE	From Army	From Other	Paid	From Army	From Other	Paid	From RDTE	In Work	Other	Total
Army Non-Industrial Fund																					
Installations																					
14.																					
Army Engineer	81	4433	1324	81	19	5857	935	-	6792	106	-	-	-	-	-	-	56	-	-	162	
Flight Activ- ity, Edwards	82	5443	1206	14	20	6683	1252	-	7935	110	-	-	-	-	-	-	66	-	-	176	
Air Force Base, ⁸⁴ California	83	5705	1250	15	20	6990	1291	-	8281	110	-	-	-	-	-	-	66	-	-	176	
15.																					
Army Materiel Development &	81	5646	-	-	-	5646	734	-	6380	133	-	-	-	-	-	-	44	-	-	177	
Readiness	82	6141	-	-	-	6141	854	-	6995	143	-	-	-	-	-	-	45	-	-	188	
Command,	83	762	-	-	-	762	881	-	8553	143	-	-	-	-	-	-	45	-	-	188	
Alexandria, Virginia	84	8398	-	-	-	8398	885	-	9281	143	-	-	-	-	-	-	45	-	-	188	
16.																					
Army Research Office, Re-	81	4843	-	-	-	4843	33	-	4876	95	-	-	-	-	-	-	2	-	-	97	
Search Tri- angle Park,	82	5900	-	-	-	5900	38	-	5938	95	-	-	-	-	-	-	2	-	-	97	
North Carolina	83	6600	-	-	-	6600	39	-	6619	95	-	-	-	-	-	-	2	-	-	97	
	84	7600	-	-	-	7600	39	-	7639	95	-	-	-	-	-	-	2	-	-	97	

^{1/} Exclusive of Military Personnel and Military Construction.

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds			MIL. Pers.			Civil Paid			Service Paid			Contractor Paid			Mil. Pers.	
		Mgmt	Bureau	Army	Other	DOD	Total	RDTE	Other	Total	From RDTE	From Army	From Other	RDTE	From RDTE	From Other	RDTE	From RDTE	From Other	In RDTE	
Army Non-In- dustrial Fund Installations																					
17.																					
Atmospheric	81	9764	240	61	22	10087	2137	-	12224	195	1	-	-	-	-	128	-	128	-	324	
Science Labora- tory, White	82	9936	150	75	20	10181	2428	-	12609	200	1	-	-	-	-	128	-	128	-	329	
Sands Missile Range, Las Cruces, New Mexico	84	11526	150	74	20	11770	1252	-	13022	230	1	-	-	-	-	64	-	64	-	295	
18.																					
Aviation Development	81	6678	1621	-	6091	14390	2718	-	17128	94	-	-	-	-	-	164	-	164	-	258	
Test Activity,	82	7581	1270	-	5646	14497	2950	-	17456	94	-	-	-	-	-	156	-	156	-	250	
Ft. Rucker, Alabama	84	10119	-	-	4800	14919	2477	-	17396	94	-	-	-	-	-	126	-	126	-	220	
19.																					
Aviation Research and Development	81	21082	3484	25	2395	26986	751	1085	28822	525	1	60	-	-	-	45	65	65	696		
Command, St. Louis, Missouri	82	20394	2966	43	2588	25991	815	1347	28173	452	1	74	-	-	-	44	71	71	642		

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)						PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ^{1/}			Mil. Pers.			Civil Service			Contractor			
		Mgmt	Bureau	Army	Other	Sub- Total	RDTE	Other	Total	RDTE	From Army	Paid From Other	RDTE	From RDTE	Paid From Other	Mil. Pers.	
Army Non-In- dustrial Fund Installations																	
20.																	
Aviation Test Board, Ft.	81	2869	667	-	-	3536	1399	-	4935	36	-	-	-	-	79	-	115
Rucker, Alabama	82	1861	-	-	-	1861	1629	-	3490	36	-	-	-	-	79	-	115
	83	1805	-	-	-	1805	1660	-	3465	36	-	-	-	-	79	-	115
	84	2080	-	-	-	2080	1668	-	3748	36	-	-	-	-	79	-	115
21.																	
Avionics Research and Development Activity, etc., Monmouth, New Jersey	81	5470	7905	208	-	13583	267	217	14067	345	3	-	-	-	16	13	377
	82	6289	7856	570	-	14715	322	209	15246	312	5	-	-	-	17	11	365
	83	6134	8152	580	-	14866	313	254	15433	332	5	-	-	-	16	13	366
	84	6484	8177	590	-	15451	315	256	16022	332	5	-	-	-	16	13	366
22.																	
Ballistic Mis- sile Defense Advanced Tech- nology Center, Huntsville, Alabama	81	4819	-	-	-	4819	210	-	5029	103	-	-	-	-	8	-	111
	82	5560	-	-	-	5560	243	-	5803	103	-	-	-	-	8	-	111
	83	5836	-	-	-	5836	244	-	6080	103	-	-	-	-	8	-	111
	84	6128	-	-	-	6128	245	-	6371	103	-	-	-	-	8	-	111

^{1/} Exclusive of Military Personnel and Military Construction.

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and location	FY	TOA (\$ In Thousands)						PERSONNEL (Man-Years)						Contractor Mil. Pers.			
		RDTE Funds			All Other Funds			Mil. Pers.			Civil Service Paid			Contractor Mil. Pers.			
		Gmt	Bureau	Army	Other	DOD	Sub-	RDTE	Other	Total	RDTE	From Army	From RDTE	Paid	From RDTE	From Other	In Work	Paid
Army Non-Industrial Fund Installations																	
23.																	
Ballistic Mis- sile Defense	81	470	-	-	-	-	470	316	-	786	13	-	-	-	12	-	25
Program Office	82	555	-	-	-	-	555	365	-	920	13	-	-	-	12	-	25
Alexandria, Virginia	83	575	-	-	-	-	575	366	-	941	13	-	-	-	12	-	25
	84	595	-	-	-	-	595	368	-	963	13	-	-	-	12	-	25
24.																	
Ballistic Mis- sile Defense	81	8113	-	-	-	-	8113	658	-	8771	211	-	-	-	25	-	236
Systems Command,	82	10076	-	-	-	-	10076	942	-	11018	253	-	-	-	11	-	284
Huntsville, Alabama	83	11919	-	-	-	-	11919	1465	-	13186	314	-	-	-	48	-	182
	84	12776	-	-	-	-	12776	1472	-	14248	316	-	-	-	48	-	182
25.																	
Gold Regions Research and Engineering Laboratory,	81	4452	495	256	3702	8905	301	-	9206	187	3	77	-	-	14	-	281
Hanover, New Hampshire	82	5915	735	300	3855	10825	350	-	11175	187	3	77	-	-	14	-	281
	83	6589	680	350	5640	13259	353	-	13612	187	3	77	-	-	14	-	281
	84	7185	700	350	6000	14235	355	-	14590	187	3	77	-	-	14	-	281

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)											
		RDTE Funds			All Other Funds ¹			Mil. Pers.				Civil Paid			Service Paid			Contractor Paid			Mil. Pers.		
		Mgmt	Bureau	Army	Other	DOO	Sub-	RDTE	Other	Total	RDTE	From Army	From Other	RDTE	From Army	From Other	RDTE	From Army	From Other	RDTE	Funds	Work	Other	Total
Army Non-Industrial Fund Installations																							
26.																							
Cold Regions	81	4956	342	-	-	5298	4390	-	9688	22	-	-	-	-	-	-	263	-	-	285			
Test Center,	82	5877	250	-	-	6127	4988	-	11115	22	-	-	-	-	-	-	263	-	-	285			
Ft. Greeley,	83	6396	832	-	-	7228	5146	-	12374	22	-	-	-	-	-	-	263	-	-	285			
Alaska	84	7127	675	-	-	7802	5171	-	12973	22	-	-	-	-	-	-	263	-	-	285			
27.																							
Communications	81	1470	19	-	158	1647	1045	-	2692	31	-	-	-	-	-	-	59	-	-	90			
Land Electro- nics Board,	82	1892	-	-	319	2211	1382	-	3593	32	-	-	-	-	-	-	67	-	-	99			
Ft. Gordon,	83	1399	-	-	174	1571	1408	-	2981	31	-	-	-	-	-	-	67	-	-	98			
Georgia	84	1139	-	-	-	1139	1415	-	2554	31	-	-	-	-	-	-	67	-	-	98			
28.																							
Communications	81	84205	10729	3062	12005	110001	5392	-	115393	1524	41	249	82	-	323	-	2219						
and Electro- nics Command,	82	101602	10760	3528	14301	132191	6530	-	138621	1579	35	245	82	-	319	-	2280						
Ft. Monmouth,	83	125139	10951	3566	14722	154378	6614	-	160992	1588	34	247	82	-	318	-	2289						
New Jersey	84	145260	11305	3717	15402	175684	6606	-	182290	1572	35	249	82	-	316	-	2274						

¹/ Exclusive of Military Personnel and Military Construction.

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$, in Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds				All Other Funds			Mil. Pers.			Civil Service Paid		Service Paid		Contractor Paid		Mil. Pers.			
		Hgmt	Bureau	Army	DOD	Other Funds	Sub- Total	RDTE	Other	Total	RDTE	From Army	From RDTE	Other	RDTE	From RDTE	From Other	In Work	Other	Total	
Army Non-In- dustrial Fund																					
Installations																					
29.																					
Computer Systems	81	901	-	-	-	-	901	191	-	1094	20	-	-	-	-	-	7	-	27		
Command,	82	902	-	-	-	-	902	191	-	1093	21	-	-	-	-	-	6	-	27		
Ft. Belvoir, Virginia	83	952	-	-	-	-	952	192	-	1144	21	-	-	-	-	-	6	-	27		
	84	197	-	-	-	-	997	191	-	1190	21	-	-	-	-	-	6	-	27		
30.																					
Construction	81	7929	4153	1139	358	13579	86	-	11665	182	-	-	-	-	-	-	4	-	186		
Engineering	82	8550	4680	1200	120	14550	199	-	14749	182	-	-	-	-	-	-	8	-	190		
Research	83	12664	5065	1035	100	18864	227	-	19091	182	-	-	-	-	-	-	9	-	191		
Laboratory,	84	12309	4800	1000	250	18159	253	-	18612	182	-	-	-	-	-	-	10	-	192		
Champaign, Illinois																					
31.																					
Corps of Engineer RDTE	81	495	-	-	-	-	495	21	-	516	11	-	-	-	-	-	1	-	12		
Headquarters	82	657	-	-	-	-	657	25	-	682	11	-	-	-	-	-	1	-	12		
Activities,	83	522	-	-	-	-	522	25	-	547	11	-	-	-	-	-	1	-	12		
Washington, DC	84	560	-	-	-	-	560	25	-	585	11	-	-	-	-	-	1	-	12		

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ¹			Mil. Pers.				Civil Service Paid			Contractor Paid			Mil. Pers.			
		Hgmt	Bureau	Other	Army	Other	DOD	Sub-	Total	RDTE	Other	Total	From RDTE	From RDTE	From RDTE	From RDTE	From RDTE	From RDTE	From RDTE	From RDTE	From RDTE
Army Non-Industrial Fund Installations																					
32.																					
DARCOM	81	425	2844	-	-	-	-	3269	50	-	3319	5	-	-	-	-	-	3	-	-	8
Research and Development	82	403	-	-	-	-	-	403	76	-	479	9	-	-	-	-	-	4	-	-	13
Field Support Activity, Ft. Hood, Texas	83	1121	-	-	-	-	-	1121	78	-	1199	9	-	-	-	-	-	4	-	-	13
Dugway, Proving Ground, Utah	84	571	-	-	-	-	-	571	79	-	650	9	-	-	-	-	-	4	-	-	13
33.																					
Dugway	81	20026	6827	759	2200	29812	3689	-	33501	652	-	11	280	-	221	-	-	1164			
Proving Ground, Utah	82	29186	7280	2590	1900	40936	3262	-	44218	652	-	11	161	-	172	-	-	996			
Dugway, Utah	83	29289	7463	2995	2365	42112	3366	-	45478	652	-	11	228	-	172	-	-	1063			
34.																					
Electronic Proving Ground, Ft. Huachuca, Arizona	81	14218	10037	4095	367	28717	8964	2270	39951	189	40	46	203	43	537	136	1194				
Ft. Huachuca, Arizona	82	27923	11116	5115	407	44561	10185	2580	57126	189	40	46	225	49	537	136	1222				
35.																					
36.																					
37.																					
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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man Years)										
		RDTE Funds			All Other Funds			MIL. Pers.			Civil Service			Contractor MIL. Pers.								
		Mgmt	Bureau	Army	Other	DOO	Sub-	RDTE	Other	Total	RDTE	From	RDTE	From	RDTE	From	RDTE	From	RDTE	From	Total	
Army Non-Industrial Fund Installations																						
15.	Electronics Research and Development	81	10727	568	-	-	-	11295	417	-	11712	247	-	-	-	-	-	-	25	-	272	
	Command, Adelphi, Maryland	82	12792	600	-	-	-	13392	588	-	13980	249	-	-	-	-	-	-	31	-	280	
		83	12418	600	-	-	-	13018	410	-	13448	236	-	-	-	-	-	-	22	-	258	
		84	12921	600	-	-	-	13521	413	-	13954	236	-	-	-	-	-	-	22	-	258	
16.	Engineer Topographic Laboratory, Ft. Belvoir, Virginia	81	6296	1596	2495	8	10193	150	172	10715	165	114	-	-	-	-	-	-	7	8	294	
		82	7321	1246	2601	20	11188	175	199	11562	171	106	-	-	-	-	-	-	7	8	294	
		83	8120	1406	2596	-	12122	176	202	12500	180	99	-	-	-	-	-	-	7	8	294	
		84	9026	1513	2678	-	13217	177	203	13597	191	88	-	-	-	-	-	-	7	8	294	
17.	Engineer Waterway Experimental Station, Vicksburg, Mississippi	81	5811	6188	9242	9029	10270	107	42	10419	290	223	218	-	-	-	-	-	5	2	718	
		82	7344	6100	10000	9100	32744	125	49	32918	305	223	203	-	-	-	-	-	5	2	718	
		83	9140	6500	10200	9300	15140	126	50	15316	325	212	196	-	-	-	-	-	5	2	718	
		84	10188	6800	10500	9600	17288	127	51	17466	116	206	189	-	-	-	-	-	5	2	718	

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INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)						PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ^{1/}			Mil. Pers.			Civil Service			Contractor			Mil. Pers.
		Bureau	Army	Other	Sub- Funds ^{1/}	Total	RDTE	Other	Total	RDTE	RDTE	From Army	From Other	Paid From RDTE	From RDTE	In Work	From Other	In RDTE
Army Non-Industrial Fund Installations																	
38.																	
Field	81	1465	79	-	172	1716	2522	-	4238	37	-	-	-	-	142	-	179
Artillery	82	1676	-	-	-	1676	1733	-	5409	37	-	-	-	-	181	-	218
Board, Ft.	83	1271	-	-	-	1271	3195	-	4466	37	-	-	-	-	152	-	189
STII, Oklahoma	84	144	-	-	-	1344	3210	-	4554	37	-	-	-	-	152	-	189
39.																	
Foreign Science and Technology Center,	81	107	-	-	-	107	17	-	126	3	-	-	-	-	1	-	4
Center, Ft. Charlottesville, Virginia	82	127	-	-	-	127	19	-	146	3	-	-	-	-	1	-	4
Center, Ft. Benning, Georgia	83	131	-	-	-	131	20	-	151	3	-	-	-	-	1	-	4
	84	139	-	-	-	139	20	-	159	3	-	-	-	-	1	-	4
40.																	
Infantry Board,	81	2306	-	-	356	2662	2001	-	4663	54	-	-	-	-	113	-	167
Ft. Benning,	82	1964	-	-	165	2129	2516	-	4645	55	-	-	-	-	122	-	177
	83	2222	-	-	145	2367	2564	-	4931	55	-	-	-	-	122	-	177
	84	2216	-	-	195	2431	2576	-	5007	55	-	-	-	-	122	-	177

1/ Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)						PERSONNEL (Man Years)						Contractor Paid						
		RDTE Funds			All Other Funds ^{1/}			Mil. Pers.			Civil Service Paid			Contractor Paid						
		Mgmt	Bureau	Army	Other	DOB	Funds	Sub-Total	RDTE	Other	Total	From Army	From RDTE	From Other	From RDTE	From Other	In RDTE	In Work	Other	Total
Army Non-Industrial Fund Installations																				
61.																				
Institute of Surgical Research, Ft. Sam Houston, Texas	81	2061	-	-	1061	3122	2825	-	5947	77	-	-	-	-	-	152	-	279		
	82	2602	-	-	250	2852	1286	-	6118	80	-	-	-	-	-	152	-	212		
	83	2758	-	-	275	1033	1161	-	6324	80	-	-	-	-	-	152	-	222		
	84	3065	-	-	300	1165	1157	-	6722	80	-	-	-	-	-	152	-	-		
62.																				
Intelligence and Security Test Board, Ft. Huachuca, Arizona	81	1092	48	-	140	1280	1667	-	2927	22	-	-	2	-	93	-	117			
	82	3759	-	-	721	6490	2015	-	6525	24	-	-	2	-	98	-	126			
	83	1963	-	-	1500	3441	2060	-	5503	24	-	-	2	-	98	-	126			
	84	2719	-	-	2200	4939	2069	-	7008	24	-	-	2	-	98	-	126			
63.																				
Joint Tactical Fusion (JTF), Vint Hill Farms, Virginia	81	613	-	-	-	613	114	-	747	10	-	-	-	-	8	-	18			
	82	392	-	-	-	192	171	-	563	11	-	-	-	-	9	-	20			
	83	1492	-	-	-	1492	191	-	1883	11	-	-	1	-	20	-	56			
	84	1530	-	-	-	1510	613	79	2022	42	-	-	1	-	21	4	70			

^{1/} Exclusive of Military Personnel and Military Construction.

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Section 5 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ^{1/}			Mil. Pers.				Civil Paid		Service Paid		Contractor Paid		Mil. Pers.			
		Budget	Other	Other	Bureau	Army	DOD	Sub- Total	RDTE	Other	Total	RDTE	RDTE	From Army	From Other	RDTE	From RDTE	From Other	In RDTE	Other	Total
Army Non Indus- trial Fund Installations																					
44.																					
Joint Tactical	81	528	-	-	-	-	-	528	50	-	578	11	-	-	-	-	-	3	-	14	
Information	82	445	-	-	-	-	-	445	114	-	559	10	-	-	-	-	-	6	-	16	
Distribution	83	479	-	-	-	-	-	479	117	-	596	10	-	-	-	-	-	6	-	16	
System,	84	515	-	-	-	-	-	515	118	-	633	10	-	-	-	-	-	6	-	16	
Hanscom Air Force Base, Massachusetts																					
45.																					
Roaejalein	81	80255	8195	10285	70	98805	842	-	99647	132	-	-	2688	269	32	-	3121	-			
Missile Range,	82	89175	13360	10165	35	112735	971	-	113708	132	-	-	2728	297	32	-	3189	-			
Marshall	83	93275	19990	13005	-	126270	977	-	127247	132	-	-	2715	326	32	-	3205	-			
Islands	84	99185	8070	13750	-	121005	981	-	121986	132	-	-	2745	241	32	-	3150	-			
46.																					
Letterman Army	81	5685	972	-	-	6657	2955	-	9612	108	-	-	61	7	159	-	335	-			
Institute of	82	5734	562	-	317	6613	3480	-	10091	105	-	-	58	7	161	-	331	-			
Research, San	83	6104	565	-	421	7090	1519	-	10629	117	-	-	58	7	161	-	343	-			
Francisco,	84	7598	550	-	451	8599	3556	-	12155	117	-	-	58	6	161	-	342	-			
California																					

^{1/} Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ^{1/}			Mil. Pers.				Civil Service Paid		Contractor Paid		Mil. Pers.					
		Hgmt	Other	Other	Bureau	Army	DOD	Sub- Total	RDTE	Other	Total	From Army	From RDTE	From RDTE	From Other	From RDTE	From Other	From RDTE	From Other	Total	
Army Non-Industrial Fund Installations																					
47.	Liaison Field Offices, Various Locations (ARI)	81	5526	-	-	-	-	5526	400	-	5926	128	-	-	-	-	-	17	-	145	
	82	5628	-	-	-	-	-	5628	490	-	6118	128	-	-	-	-	-	18	-	146	
	83	5565	-	-	-	-	-	5565	494	-	6059	128	-	-	-	-	-	18	-	146	
	84	5704	-	-	-	-	-	5704	497	-	6201	128	-	-	-	-	-	18	-	146	
48.	Liaison Field Offices, Various Locations (DARCOM)	81	1520	-	-	-	-	1520	601	-	2121	33	-	-	-	-	-	36	-	69	
	82	1818	-	-	-	-	-	1818	681	-	2501	39	-	-	-	-	-	36	-	75	
	83	2223	-	-	-	-	-	2223	704	-	2927	41	-	-	-	-	-	36	-	77	
	84	2329	-	-	-	-	-	2329	708	-	3037	41	-	-	-	-	-	36	-	77	
49.	Medical Research and Development Command, Ft. Detrick, Maryland	81	55731	621	52	455	56859	7527	-	64386	382	-	-	-	-	-	-	405	-	787	
	82	79680	215	3	-	-	79898	8841	-	88739	415	-	-	-	-	-	-	409	-	824	
	83	148640	-	3	-	-	148643	8925	-	157568	419	-	-	-	-	-	406	-	825		
	84	224457	-	-	-	-	224457	8967	-	231424	425	-	-	-	-	-	406	-	831		

^{1/} Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	EY	TOA (\$ In Thousands)						PERSONNEL (Man-Years)										
		RDTE Funds			All Other Funds ^{1/}			MIL Pers.			Civil Service			Contractor			MIL Pers.	
		Mgmt Bureau	Other Army	Other DOD	Sub- Total	RDTE	Other	Total	RDTE	RDTE	Paid From Army	Paid From Other	Paid From RDTE	Paid From RDTE	Paid From Other	Paid From RDTE	In Work	Other	Total
Army Non-Industrial Fund																		
Installations																		
50.																		
Medical	81	7116	176	-	45	7337	1394	-	8711	136	-	-	-	-	75	-	211	
Research	82	8668	400	-	-	9068	1621	-	10689	137	-	-	-	-	75	-	212	
Institute of	83	9189	425	-	-	9614	1649	-	11263	145	-	-	-	-	75	-	220	
Chemical	84	10108	450	-	-	10558	1657	-	12215	145	-	-	-	-	75	-	220	
Defense, Aberdeen, Maryland																		
51.																		
Mobility	81	12601	7100	1500	200	21401	1235	-	22616	861	16	2	-	-	74	-	953	
Equipment	82	15185	6700	1200	200	23485	1404	-	24889	848	13	2	-	-	74	-	937	
Research and	83	16910	7000	1000	200	25110	1448	-	26558	850	11	2	-	-	74	-	937	
Development	84	18516	7000	1000	200	26736	1455	-	28191	849	11	3	-	-	74	-	937	
Command, Ft. Belvoir, Virginia																		
52.																		
Natick	81	26815	980	298	337	28650	3158	81	31691	871	4	16	-	-	180	5	1076	
Laboratories	82	28893	1019	336	354	30604	3628	95	34127	859	4	14	-	-	180	5	1062	
Natick,	83	28409	1058	354	372	30193	3718	98	34029	865	4	14	-	-	181	5	1069	
Massachusetts	84	31265	1109	370	390	33134	3755	98	36987	865	4	14	-	-	181	5	1069	

1/ Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds				All Other Funds			Mil. Pers.			Civil Service Paid				Contractor Paid				Mil. Pers.	
		Hgmt Bureau	Army	Other	DOD	1/	Sub-	Total	RDTE	Other	Total	RDTE	From Army	From Other	Paid From RDTE	From RDTE	From Other	In RDTE	Other	Total	
Army Non-Industrial Fund Installations																					
53.																					
Night Vision and Electro-	81	14610	2374	510	3376	20870	534	-	21404	382	5	50	-	-	-	12	-	-	469		
Optics Laboratory, Ft.	82	15450	2500	560	3700	22210	607	-	22817	382	5	50	-	-	-	12	-	-	469		
Belvoir, Virginia	83	16129	2500	560	3700	22889	626	-	23515	382	5	50	-	-	-	12	-	-	469		
	84	16814	2500	560	3700	21594	629	-	24223	382	5	50	-	-	-	12	-	-	469		
54.																					
Research Institute for Behavioral Sciences, Alexandria, Virginia	81	9517	-	-	3	9520	353	-	9873	191	-	-	-	-	-	15	-	-	206		
	82	11244	-	-	-	11244	381	-	11625	205	-	-	-	-	-	16	-	-	219		
	83	11509	-	-	-	11509	384	-	11893	222	-	-	-	-	-	16	-	-	236		
	84	11874	-	-	-	11874	386	-	12260	222	-	-	-	-	-	16	-	-	236		
55.																					
Research and Technology Laboratory, Moffett Field, California	81	18971	4883	2049	-	25903	284	-	26187	526	-	-	-	-	-	17	-	-	563		
	82	20295	3660	519	-	24474	122	-	24796	526	-	-	-	-	-	17	-	-	563		
	83	21225	4026	571	-	25822	111	-	26155	527	-	-	-	-	-	17	-	-	564		
	84	21856	4118	752	-	26726	114	-	27060	527	-	-	-	-	-	17	-	-	564		

1/ Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man-Years)									
		RDTE Funds			All Other Funds ^{1/}			Mil. Pers.				Civil Service			Contractor			Mil. Pers.			
		Mgmt	Bureau	Army	Other	Sub-Funds	Total	RDTE	Other	Total	RDTE	From Army	Paid	From Other	Paid	From RDTE	From Other	Funds	Work	Other	Total
Army Non-Industrial Fund Installations																					
56.																					
Signal Warfare	81	1726	125	1749	2212	5812	114	234	6180	31	38	66	2	2	8	14	161				
Laboratory,	82	1974	132	2343	2322	6771	152	266	7189	33	41	62	2	2	8	14	162				
Vint Hill	83	2138	139	2793	2518	7588	157	274	8019	34	42	60	-	-	8	14	158				
Farms,	84	2399	146	3072	2616	8233	157	275	8665	36	44	56	-	-	8	14	158				
Virginia																					
57.																					
Standard- ization Group,	81	16	-	-	-	16	11	-	49	-	-	-	-	-	-	-	-	2	-	2	
Australia	82	17	-	-	-	17	38	-	55	-	-	-	-	-	-	-	-	2	-	2	
	83	21	-	-	-	21	39	-	60	-	-	-	-	-	-	-	-	2	-	2	
	84	20	-	-	-	20	39	-	59	-	-	-	-	-	-	-	-	2	-	2	
58.																					
Standard- ization Group,	81	48	-	-	-	48	13	-	81	2	-	-	-	-	-	-	-	2	-	4	
Canada	82	53	-	-	-	53	38	-	91	2	-	-	-	-	-	-	-	2	-	4	
	83	55	-	-	-	55	39	-	94	2	-	-	-	-	-	-	-	2	-	4	
	84	59	-	-	-	59	39	-	98	2	-	-	-	-	-	-	-	2	-	4	
59.																					
Standard- ization Group,	81	159	-	-	-	159	50	-	209	3	-	-	-	-	-	-	-	3	-	6	
Germany	82	186	-	-	-	186	57	-	243	3	-	-	-	-	-	-	-	3	-	6	
	83	249	-	-	-	249	59	-	308	3	-	-	-	-	-	-	-	3	-	6	
	84	254	-	-	-	254	59	-	313	3	-	-	-	-	-	-	-	3	-	6	

^{1/} Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)						PERSONNEL (Man-Years)						Contractor Paid					
		RDTE Funds			All Other Funds			Mil. Pers.			Civil Service Paid			Contractor Paid					
		Dept	Bureau	Army	Other	DOD	Sub-	RDTE	Other	Total	RDTE	From Army	From Other	RDTE	From Other	RDTE			
Army Non-Industrial Fund Installations																			
60.																			
Standard- ization Group,	81	1193	-	-	-	-	-	1193	117	-	1110	14	-	-	-	7	-	21	
United Kingdom	82	1606	-	-	-	-	-	1606	113	-	1539	14	-	-	-	7	-	21	
	83	1537	-	-	-	-	-	1537	117	-	1674	14	-	-	-	7	-	21	
	84	1681	-	-	-	-	-	1681	138	-	1819	14	-	-	-	7	-	21	
61.																			
Tank Automotive Research and Development	81	18158	2895	315	-	-	-	21388	885	33	22306	502	7	152	-	-	51	2	716
Command,	82	18757	951	1809	-	-	-	21517	854	38	22409	474	44	152	-	-	45	2	717
Warren, Michigan	83	21310	570	1057	-	-	-	22917	881	39	21857	521	24	152	-	-	45	2	746
	84	21779	273	616	-	-	-	22688	727	39	23454	503	13	152	-	-	37	2	707
62.																			
Tropic Test Center, Panama	81	2913	89	1	87	1090	1215	-	4125	87	-	-	5	-	74	-	-	166	
Canal Zone, Panama	82	3344	130	2	98	1574	1328	-	4902	86	-	-	5	-	70	-	-	161	
	83	3750	187	3	160	4100	1370	-	5670	86	-	-	7	-	70	-	-	163	
	84	4055	142	1	121	4121	1376	-	5697	89	-	-	8	-	70	-	-	167	

1/ Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS IN-HOUSE

Installation and Location	FY	TOA (\$ in Thousands)										PERSONNEL (Man-Years)										
		RDTE Funds				All Other Funds ¹			Mil. Pers.			Civil Service			Contractor				Mil. Pers.			
		Mgmt	Bureau	Army	Other	Sub-	Total	RDTE	Other	Total	From Army	Paid RDTE	From Other	Paid RDTE	From Other	Paid RDTE	From Funds	In Work	Other	Total		
Army Non-Ind ustrial Fund Installations	63.																					
Walter Reed	81	22214	418	-	-	22652	9218	-	31870	417	-	-	-	-	-	496	-	913				
Army Institute of Research,	82	24917	314	74	42	25347	10851	-	36198	437	-	-	-	-	-	502	-	919				
Washington, DC	83	26188	314	74	3	26579	10882	-	37461	455	-	-	-	-	-	495	-	950				
	84	32749	314	74	3	33140	10955	-	44095	461	-	-	-	-	-	496	-	957				
64.																						
White Sands Missile Range,	81	131229	30145	11316	1819	174509	14206	-	188715	2676	336	23	1157	-	851	-	5043					
Cruces,	82	188147	38298	8575	1656	216676	16274	-	252950	2728	318	23	1181	-	858	-	5108					
ca Mexico	83	175873	45472	8687	1694	211726	16788	-	248514	2726	321	23	1347	-	858	-	5275					
	84	218582	49028	8730	1995	278335	16868	-	295203	2723	324	23	1347	-	858	-	5275					
65.																						
Yuma Proving Ground, Yuma,	81	26883	14900	1115	1140	44038	5275	-	49313	773	-	10	113	-	316	-	1212					
Arizona	82	32251	21935	1011	1188	56685	5994	-	62679	773	-	10	155	-	316	-	1254					
	83	37053	21938	3185	1696	63872	6183	-	70055	773	-	10	168	-	316	-	1267					
	84	45627	30748	3504	1696	81375	6213	-	82588	773	-	10	168	-	316	-	1267					

1/ Exclusive of Military Personnel and Military Construction.

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Section 4 (Contd)

INSTALLATION ANALYSIS - IN-HOUSE

Installation and Location	FY	TOA (\$ In Thousands)										PERSONNEL (Man-Years)											
		ROUTE Funds				All Other Funds				Mil. Pers.		Civil Service Paid				Contractor Paid				Mil. Pers.			
		Mgmt	Bureau	Army	DOD	1/	Sub-	Total	ROUTE	Other	Total	ROUTE	From Army	From Other	ROUTE	From Army	From Other	ROUTE	From Army	From Other	ROUTE	From Army	From Other	Total
Subtotal Army	81	798846	158552	52601	117780	1127779	11262	10228	1250630	16680	836	2266	4718	526	6455	610	32591						
Non-Industrial Fund	82	1010308	169539	55062	124773	1359662	130814	12882	1503378	16985	844	2741	4816	580	6528	676	31168						
	83	1121655	181754	62283	128975	1496667	131902	13322	1641891	17167	807	2683	5086	607	6408	678	33616						
	84	1367565	188590	64677	132457	1753089	131117	13466	1897692	17217	785	2670	5117	521	6337	682	33329						
Total, In-House	81	1042915	250499	72419	132806	1498659	119931	10480	1629070	21824	1378	3195	4758	526	6802	622	41105						
	82	1226518	265136	73074	137962	1752890	138221	13175	1904288	24068	1427	3131	4850	580	6811	688	41575						
	83	1403732	276814	79011	140664	1900021	139319	13668	2053008	24368	1337	3001	5123	507	6708	692	41836						
	84	1675476	282116	83807	144508	2185907	138519	13889	2338315	24419	1328	2991	5167	21	6635	699	41780						

1/ Exclusive of Military Personnel and Military Construction.

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DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
ANALYSIS OF REIMBURSABLE PROGRAM
(**\$** In Thousands)

	FY 1981 ACTUAL	FY 1982 ESTIMATE	FY 1983 ESTIMATE
Customer			
Department of the Army	514,121	492,225	437,050
Other Department of Defense Components			
Department of the Navy	41,050	17,744	13,844
Department of the Air Force	61,822	38,332	48,610
US Marine Corps	11,341	10,041	12,168
Other Defense Agencies	21,011	23,497	22,068
Subtotal:	653,345	581,819	533,740
Activities Outside Department of Defense			
Department of Energy	2,027	2,283	2,865
Department of Transportation	874	915	1,120
National Aeronautics and Space Administration	461	1,462	2,232
National Security Agency	676	787	827
Trust Funds	1,141	-	-
Other	12,041	15,182	9,799
Nontederal Sources	22,893	17,712	7,317
Subtotal:	40,113	38,361	24,160
TOTAL:	693,458	620,200	557,900

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Section 2 (Cont'd)

ANALYSIS OF REIMBURSABLE PROGRAM

DESCRIPTION OF REIMBURSABLE WORK

A large percentage of the Research, Development, Test and Evaluation reimbursable program is for intra-Army (both inter/intra-appropriation) work or services performed under automatic reimbursement procedures. Research, Development, Test and Evaluation efforts also support requests received from other Federal and Nonfederal agencies on a reimbursable basis. Major areas of support include:

a. Navy. Ultrafiltration reverse osmosis system; rotating biological contractor system; studies of heat stress in personnel wearing chemical warfare clothing; radar profiling of sea ice; optical properties of sea ice; fuel filter evaluation; craft test of fuel-water separator; support of ALQ 136 and APR 44; TOMAHAWK cruise missile; armor plate; armored protection system; 5" semi-active laser program; hydrocode exploration; 75mm anti-armor weapon system.

b. Air Force. Pavement analysis and evaluation; CSA evaluation; MX support; shielding; anti-icing coating; support of MINUTE MAN II and III firing; Space Detection and Tracking System; modification to ALTAIR radar; threat models for Inter-continental Ballistic Missile/Sea Launched Ballistic Missile geometry simulations; evaluation of Air Force clothing; effect of munitions on hardened structures; assessment of Polar biomedical research; HAWK support; ground launch cruise missile; global systems demonstration; radio terminal sets; very high speed integrated circuits; ground positioning system; aircrew body armor.

c. Marine Corps. MULE program support; 8" semi-active laser program; Joint Service Small Arms Program support; cargo trailer; utility trailer; helicopter external cargo handling; cold weather clothing and equipment; man pack solar power unit development; support of the joint test element; TRI-TAC.

d. Other Defense Agencies.

(1) Defense Advanced Research Projects Agency. Anti-tactical missile construction evaluation; basic skills program; Advanced Ballistic Reentry Systems tests; engineering support; gun propellant program; global positioning systems test; infrared flyover.

(2) Defense Mapping Agency. Photogrammetric and cartographic exploitation; geodetic and geophysical support; data base/data bank support; microlorm technology; remote sensing and interdisciplinary imagery analysis.

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Section 5 (Contd)

ANALYSIS OF REIMBURSABLE PROGRAM

(3) Defense Nuclear Agency. Silo test program; material studies; hardened structures; MX related efforts; nuclear weapons effect program; vulnerability studies.

e. Department of Energy. Oil shale studies; repository sealing; mine shaft lining; blast resistant structures; energy analysis; ecological baseline investigation along Yukon.

f. Department of Transportation. Railcar pool fire test; ship test and ice deflector tests; expedite ships through ice.

g. National Aeronautics and Space Administration. Integrated tech rotor program; Joint Army Navy and Air Force base flow; energy analysis; numerical modeling of sea ice dynamics; orbital flight test-space shuttle.

h. National Security Agency. Electronic warfare equipment testing; engineering support.

i. Nonfederal Sources. Multiple Launched Rocket System for Germany, France and United Kingdom; seafood identification system; mechanical properties of multi-year ice; Alaskan driving cycle; compression tests; revegetation; waterflood monitoring

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DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
FEDERAL CONTRACT RESEARCH CENTERS

Section 6

Federal Contract Research Centers (FCRCs) are those organizations primarily engaged in providing specialized technical and scientific effort necessary to supplement that available in the Army. The centers listed are those sponsored by the Department of Defense which provide technical and management services in the management of the Army's programs. These centers provide independent, specialized, technical and scientific capabilities to supplement that available within the Department of the Army.

FCRCs have been established to permit more organizational flexibility, and greater availability of technical and scientific personnel. These research centers possess unique skills and capabilities resulting from the development of highly specialized professional staff intimately acquainted with the many facets of the Army's mission. This capability results from long association and practical experience with the Army. The in-depth background provides the Army with a research capability that cannot be immediately obtained elsewhere. Long association with the Department of Defense enables these centers to render quick response technical advisory service as well as to perform detailed research and analysis. This long association has tailored these research centers to be compatible with Army interests, procedures and operational requirements.

While the Army no longer sponsors an FCRC it will be necessary to continue research and development effort at FCRCs sponsored by the Department of Defense and the other services. These research and development contracts provide timely and innovative products and techniques appropriate to current and long-range Army missions and plans.

The requested FY 1983 FCRC requirements reflect an increase of \$7.7 million when comparing FY 1983 to FY 1982.

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Section 6 (Contd)

FEDERAL CONTRACT RESEARCH CENTERS

The following summary identifies the estimated work, excluding subcontract effort, to be placed with each Federal Contract Research Center (FCRC) from the Research, Development, Test and Evaluation, Army appropriation and from the other Army appropriations.

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1981 ACTUAL	FY 1982 ESTIMATE	FY 1983 ESTIMATE	FY 1984 ESTIMATE
AEROSPACE CORPORATION				
Research, Development, Test and Evaluation, Army				
6.21.05.A Materials	200	-	120	130
6.23.07.A Laser Weapons Technology	80	100	150	160
6.26.18.A Ballistics Technology	50	60	80	90
6.37.30.A Tactical Surveillance System	408	482	528	565
6.37.45.A Tactical Electronic Surveillance Systems	459	535	594	635
6.47.40.A Tactical Surveillance System	357	428	462	495
6.47.45.A Tactical Electronic Surveillance Systems	255	321	396	425
Total RDTE, Army	1,809	1,926	2,330	2,500
Total Aerospace Corporation	1,809	1,926	2,330	2,500

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Section 6 (Contd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(**\$** in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

AEROSPACE CORPORATION (Continued)

Remarks: The expertise and facilities of Aerospace Corporation are required to support the Army in FY 1981-FY 1984 as follows:

1. Technical expertise to assist in successful application and demonstration of metal matrix composites in transmission cases and exploitation of aerospace steel for Army armor requirements.
2. Provide laser facilities for conducting damage and vulnerability experiments and required test program support as well as basic research, experimental performance and theoretical analyses of pulsed chemical lasers.
3. Continuing Aerospace support is required in the area of ballistics technology. In FY 1981, a description of the two dimensional unsteady muzzle exhaust flow over both a single and double baffle configuration was developed. In FY 1982, consideration will begin on the geometry of a field muzzle brake and computation of the idealized three-dimensional brake. In FY 1983, computation of the flow through the first baffle chamber of a field muzzle brake will be conducted. The computation of the flow through both the first and second chambers of a double baffle muzzle brake is planned for FY 1984.
4. General Systems Engineering/Technical Direction and Systems support is required in the development of a comprehensive system concept defining the functions, equipment, communications, personnel and interfaces necessary to integrate space system support into ground force operations. Additional requirements include technical support and systems studies in evaluation of Army unique space systems capabilities; support of simulation development and documentation; and exercise several simulation programs to evaluate the support of potential advanced space systems to the tactical commander.

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Section 6 (Cont'd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1981 ACTUAL	FY 1982 ESTIMATE	FY 1983 ESTIMATE	FY 1984 ESTIMATE
LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY				
Research, Development, Test and Evaluation, Army				
6.23.07.A Laser Weapons Technology	-	-	250	300
6.27.15.A Tactical Electronic Warfare Techniques	-	-	100	100
6.31.04.A Ballistic Missile Defense Advanced Technology.	9,545	10,949	12,246	13,005
6.37.06.A IFF Development (NATO)	1,800 *	1,700 *	-	250
6.53.01.A Kwajalein Missile Range.	3,785	4,560	5,437	5,775
6.58.04.A White Sands Missile Range.	1,000	1,200	-	-
6.58.06.A DOD High Energy Laser Systems Test Facility (WSMR)	-	-	2,000	2,300
Total R&DTE, Army	14,330	16,709	20,033	21,730
Total R&DTE, Army included in Air Force ceiling	1,800	1,700	-	-
Total Lincoln Laboratory, Massachusetts Institute of Technology	16,130	18,409	20,033	21,730

* Program funded by Army but supported with Air Force ceiling.

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Section 6 (Contd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

LINCOLN LABORATORY, MASSACHUSETTS INSTITUTE OF TECHNOLOGY (Continued)

Remarks:

1. Lincoln Laboratory provides a unique research and development capability not duplicated in industry. Lincoln Laboratory serves as *Scientific Director of the Kiernan Reentry Measurement Site at Kwajalein Missile Range*. They have been responsible for conceptualization, design and system operation on a continuous basis since 1960. The United States possesses no other comparable facility capable of collecting exoatmospheric data and recording missile reentry phenomena than the Kiernan Reentry Measurement Site radar complex.
2. Lincoln Laboratory effort includes *direction of all activities required to assure readiness and optimum coverage of a mission by the Kiernan Reentry Measurement Site radars*. Responsibilities of their systems engineers and analysts include upgrades to the radars to meet the changing and unique mission requirements generated by range user programs and to improve data quality and system reliability.
3. In support of the Ballistic Missile Defense Advanced Technology program, efforts will continue in the areas of discrimination techniques, signal processing, advance radar components, millimeter wave instrumentation radar and monolithic millimeter wave transceiver module, and optical aircraft measurement program sensor development and system integration.
4. Lincoln Laboratory also provides consulting services and technical expertise in the conceptual design of the instrumentation for the Department of Defense High Energy Laser Systems Test Facility at the White Sands Missile Range. Continued support is required for the education and analysis of high energy laser test requirements as well as experimental test program planning, test components and instrumentation, acquiring and reducing data in support of the laser damage and vulnerability program.

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Section 6 (Cont'd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1981 ACTUAL	FY 1982 ESTIMATE	FY 1983 ESTIMATE	FY 1984 ESTIMATE
MITRE CORPORATION				
Research, Development, Test and Evaluation, Army				
6.22.02.A Aircraft Avionics Technology	300	400	400	480
6.27.01.A Communications Technology	966	890	1,320	1,480
6.27.04.A Military Environmental Criteria Development	-	-	-	120
6.33.08.A Ballistic Missile Defense Systems Technology	-	365	416	450
6.36.29.A Division Support Weapon System	-	150	290	350
6.37.07.A Communications Development	732	112	220	265
6.37.13.A Joint Tactical Information Distribution Systems	-	600	880	1,000
6.37.23.A Command and Control (C2) Tactical Automation	-	-	140	750
6.37.45.A Tactical Electronic Support Measures Systems	480	480	-	-
6.43.21.A Joint Tactical Fusion Program	-	-	1,050	1,180
6.47.01.A Communications Engineering Development	546	570	625	450
6.47.02.A Joint Tactical Information Distribution Systems	-	840	912	1,000
6.47.12.A Army Tactical Command, Control, and Communications Systems Engineering	836	1,123	2,740	3,080
6.47.45.A Tactical Electronic Support Measures Systems	300	470	-	-
6.47.79.A Joint Interoperability of Tactical Command and Control Systems (JINTACCS)	2,623	2,925	2,104	2,915
Total RDT&E, Army	6,783	8,925	11,097	13,520

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Section 6 (Cont'd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(\$ In Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT		FY 1981 ACTUAL	FY 1982 ESTIMATE	FY 1983 ESTIMATE	FY 1984 ESTIMATE
MITRE CORPORATION (Continued)					
Operations and Maintenance, Army					
202399	Central Army Group Command Control Information System	697	547	-	-
202399	USAREUR Command Control Information System Implementation	1,100	1,200	1,200	1,200
313298	World-Wide Military Command and Control System	-	-	760	-
315128	Software Penetration Evaluation Analysis	-	-	-	150
381302	Intelligence and Threat Analysis Center Technical Support	-	-	828	910
393111	Army Command and Control Master Plan	200	400	-	-
393111	Transition Communication Planning	-	-	361	875
393145	Command and Control Technical Support	675	857	1,000	1,200
395701	Army Base Information Transfer System/Walter Reed Medical Center Information Transfer System	720	-	-	1,055
951212	Work Plan Small Computer	-	-	135	-
958212	Combat Service Support Transition Plan	-	-	-	90
Total Operations and Maintenance, Army		3,192	3,004	4,784	5,680
Total MITRE Corporation		9,975	11,929	15,881	19,200

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Section 6 (Contd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(\$ in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT

MITRE CORPORATION (Continued)

Remarks: The Army has a continuing need for the expertise and technical support of the C³ Division, MITRE Corporation.

1. The MITRE Corporation is a broad spectrum systems engineering and planning organization covering many important systems emphasizing command, control, and communications (C³).
2. The Army is entering an era which will be characterized by the need to exchange timely and accurate information among many diverse elements. New, automated battlefield systems encompassing the intelligence, field artillery, air defense, command and control, aviation and combat support mission areas will be fielded. Increasing emphasis is being given to closer communication and coordination between Army ground and airborne units.
3. MITRE efforts produce a detailed description of operational processes, time factors and information exchange. With this, capability gaps and system definitions can be exposed, and comparisons between current systems and proposed alternatives can be carried out. A synthesis of future C³ architecture can then be carried out using advanced technology to redress system deficiencies and to meet future requirements.
4. MITRE efforts will also be utilized in the investigation of hardware and software aspects of digital network management and control and in the development of a state-of-the-art family of militarized computers and peripherals to be utilized for all tactical computer based systems.
5. MITRE will provide systems research, analysis, engineering and technical management support; program formulation; planning; and coordination with related activities to identify and define future objective system designs for the integration of Army tactical subsystems and facilities.

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Section 6 (Contd)

FEDERAL CONTRACT RESEARCH CENTERS

SUMMARY BY APPROPRIATION AND PROGRAM ELEMENT
(**\$** in Thousands)

FEDERAL CONTRACT RESEARCH CENTER/APPROPRIATION/PROGRAM ELEMENT	FY 1981 ACTUAL	FY 1982 ESTIMATE	FY 1983 ESTIMATE	FY 1984 ESTIMATE
TOTAL PROGRAM SUMMARY BY APPROPRIATION				
Research, Development, Test and Evaluation, Army.	22,922	27,560	33,460	37,750
Operations and Maintenance, Army.	3,192	3,004	4,784	5,680
Total Federal Contract Research Center Requirement.	26,114	30,564	38,244	43,430

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DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
Section 7
MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED
FACILITIES FUNDED BY R&D, ARMY APPROPRIATION

PART I. UTILIZATION OF SECTION 2353, TITLE 10 AUTHORITY

Specialized R&D facilities and/or equipment determined to be necessary for the performance of a contract for a Military Department for research and development may be constructed by or furnished to the contractor and funded from appropriations available for research, development, test and evaluation. The Congress enacted this legislation, now 10 USC 2353, in 1956. This policy is executed through DOD Directive 4275.5. Under this policy, the Secretaries of the Military Departments or their designees, and the Directors of Defense Agencies may approve facilities projects up to \$3,000,000; the Under Secretary of Defense Research and Engineering approves projects exceeding \$3,000,000. The Congress is notified in advance of starting any project involving construction, regardless of the dollar amount. The table below provides a summary listing of all such projects accomplished in FY 1981 and planned in FY 1982 and FY 1983.

Facility/Equipment	R&D Project Number	Contractor	Location	Total Obligational Authority (Thousands of Dollars)		
				FY 1981	FY 1982	FY 1983

SECTION I

Projects Accomplished or Underway

Negative

SECTION II

Projects Planned or Projected

Negative

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Section 1 (Contd)

**MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED
FACILITIES FUNDED BY ROTE, ARMY APPROPRIATION**

PART 2. UTILIZATION OF ROTE APPROPRIATION FOR FACILITIES AT GOVERNMENT-OWNED/GOVERNMENT-OPERATED INSTALLATIONS

The ROTE appropriation may finance the development, design, purchase, and installation (including directly related foundations, shielding, environmental control, weather protection, structural adjustments, utilities and access) of equipment or instrumentation required for research, development, test and evaluation activities. The table below provides a summary listing of all such projects for the installation of equipment, where the cost of installation is \$100,000 or more, accomplished in FY 1981 and planned in FY 1982 and FY 1983.

Facility/Equipment	ROTE Project Number	Location	Total Obligational Authority (Thousands of Dollars)		
			FY 1981	FY 1982	FY 1983

SECTION I

Projects Accomplished or Underway

Installation of Air Conditioning for Computer Room	612707.AB55	US Army Engineer Topographic Laboratories, Building 2592, Fort Belvoir, Virginia	442
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SECTION II

Projects Planned or Projected

Installation of X-Ray Machine	612770.AB71	Walter Reed Army Institute of Research, Building 40, WRAIR, Washington, DC	-	100
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Section 2 (Cont'd)

**MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED
FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION**

PART 3: UTILIZATION OF RDTE APPROPRIATION FOR MINOR CONSTRUCTION

For in-house installations, construction projects in support of R&D for \$100,000 or less are funded from RDTE appropriations. Such expenditures are authorized by 10 USC 2674 and the applicable provisions of the current DOD Appropriations Act. Under this procedure, project approval at this level is authorized by the Major Command concerned, or delegated to R&D installation commanders as appropriate. The table below provides a summary total of such minor construction accomplished in FY 1981, and the estimated amounts planned for FY 1982 and FY 1983. All minor construction must result in a complete and usable facility. In no event is two or more minor construction projects or minor and major construction projects to be contrived to form a usable facility.

SUMMARY OF MINOR CONSTRUCTION FUNDED BY RDTE, ARMY

FY 1981	FY 1982	FY 1983
3,320	4,864	4,495

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Section 2 (Contd)

**MAJOR IMPROVEMENTS TO AND CONSTRUCTION OF GOVERNMENT-OWNED
FACILITIES FUNDED BY ROTE L ARMY APPROPRIATION**

**ROTE INSTALLATION PROJECT FACT SHEET
(Supporting Projects Over \$400,000)**

- I. Facility/Equipment: Installation of Air Conditioning for Computer Room
- II. R&D Program Element: 6.27.07.A
- III. R&D Project Number: A855
- IV. Location: US Army Engineer Topographic Laboratories, Building 2592, Fort Belvoir, Virginia
- V. R&D Funds Programed: FY 1981 \$442,000
- VI. Other Funds: None

VII. Relationship to R&D Program Element: The activity is involved in the research and development of highly sophisticated computer controlled equipment to satisfy the mapping, geodesy and military geographic requirement of the Army and Defense Mapping Agency under Army Projects 855, 520, US Army Materiel Development and Readiness Command, Army Space Program Office, Defense Mapping Agency and miscellaneous reimbursable programs. The rooms containing this equipment are cooled by the building central air conditioning. Thus, even in the spring and fall the building central air conditioning is operating to cool the computer rooms. This project will allow the central air conditioning to be turned off for several months of the year at considerable energy and cost savings. The original estimate during FY 1981 for this requirement was for \$250,000, however, the current government estimate is for \$442,000.

VIII. Rationale for Funding Effort in R&D: This facility and equipment is used solely for R&D missions.

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DEPARTMENT OF THE ARMY
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY
PROJECT DATA FOR CONSTRUCTION AT GOVERNMENT-OWNED
FACILITIES FUNDED BY RDTE, ARMY APPROPRIATION

Section 8

NOT APPLICABLE

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